CHARING CROSS HOSPITAL STUDENTS' LIBRARY

LONDON

JOURNAL OF MEDICINE,

A MONTHLY

Record of the Medical Sciences.

APRIL 1850.—No. XVI.

ORIGINAL COMMUNICATIONS.

ON THE PROGNOSIS AND TREATMENT OF ORGANIC DISEASES OF THE HEART.

By CHARLES J. B. WILLIAMS, M.D., F.R.S.

THERE is perhaps no group of internal structural diseases, which are more accurately distinguished by their physical signs than those of the heart. The modes of determining the condition and action of the muscular substance of the organ, made known by Corvisart, Avenbrugger, Laennec, and their successors, and the method of interpreting the valvular murmurs, which I first proposed in 1835, have rendered the Diagnosis of the more common ORGANIC DISEASES OF THE HEART comparatively easy and accurate. But the general knowledge of the PROGNOSIS and TREATMENT has not advanced in an equal degree; and mistakes are often occurring, in consequence of the misapplication of the long prevalent notions respecting the prospects and treatment of heart disease to cases which, although correctly diagnosticated as such, are not of the grave nature which is apprehended. It is a satisfactory result of extended experience on this subject, that organic lesions of the heart, even of considerable amount and complexity, are not incompatible with prolonged life, and, under favourable circumstances, with a moderate share of health and comfort. For example: About fifteen years ago, I was consulted by a medical man of middle age, who presented formidable signs and symptoms of obstructive and regurgitant disease of the aortic orifice, with greatly enlarged heart, and dilatation of the ascending aorta. The symptoms, at that time, were not only those of inordinate action of the heart, but the functions of the brain were occasionally impaired; exertion or emotion sometimes causing confusion of thought and indistinct articulation. Yet this gentleman has been engaged in a pretty extensive country practice ever since; and within the past year, when I last heard of him, he had not abandoned his professional duties. And when at length death does occur in such cases, I have been often surprised at the enormous amount of disease that had gradually accumulated, yet sometimes without causing those alarming and distressing sufferings, which occur in other instances, where the lesions are much less consi-

derable. The largest human heart that I ever saw, weighed, when empty, 40½ ounces, and measured in circumference of the ventricles, 14½ inches; in length, from arteries to apex, 8½ inches, and in thickness of the walls of the left ventricle, from 1 to 1½ inches; yet this monstrous organ carried on the circulation of its owner, a man of fifty years of age, with so little disturbance, that, until within a few weeks of his death, he was able to perform his duties as hall-porter in the town-house of a nobleman, and he had not failed to partake of the abundance of creature-comforts which such situations commonly afford.

In many other examples, I have felt the heart's impulse extending from the midsternum to the seventh or eighth rib, beyond the line of the left nipple; I have heard the harshest and loudest valvular murmurs; and, in the most tranquil state of the circulation, the walls of the chest have been visibly shaken by the strong exaggerated movements of the diseased organ; yet the patient has complained of little or no suffering, and, under favourable circumstances, has survived, and even enjoyed life, for years.

With such instances we may contrast others, in which, with signs far less prominent—an impulse rather tumultuous and irregular, than extended and violent, and murmurs rather peculiar and deep-seated than loud or long—the distress and disturbance of the circulation have been sudden and serious, and death has occurred within a few days or weeks from the first development of the symptoms.

It is, then, evident, that the pronounced character of the signs is no measure of the severity or danger of a disease of the heart; and the Prognosis is to be determined by a consideration of other circumstances. My experience leads me to point out the following, as the most significant on this subject; and I shall afterwards show, that they are equally important in relation to the treatment. They may be conveniently grouped under the following heads:—

1. Circumstances relating to the Heart itself.

2. Circumstances relating to the state of the Blood, and to its General Circulation.

Each of these heads will need some illustrative comments.

1. A Structural Disease of the Heart may be considered serious and dangerous, in proportion as it impairs the power of the organ to carry on the circulation. We may judge of this power, both by the physical signs of the action of the heart itself, and by the condition of the circulation at large. The power of the heart to carry on the circulation is represented by its natural sounds; and so long as they are distinct, with their proper characters, of comparative dulness or prolongation of the first or systolic, and clearness or shortness of the second or diastolic,—then, no matter how loud the accompanying murmurs, the heart is doing its work,[1] and there is little ground of present alarm. If, on

[1] The true causes of the natural sounds of the heart have been so fully and satisfactorily demonstrated by the experiments which I conducted in 1835, and which have been subsequently repeated and varied by numerous observers, in Europe and America, that it seems very strange that much difference of opinion should exist about them. Yet, every now and then, we hear of new explanations proposed, suggested by some crude experiment or observation of a monstrosity. A curious instance of the latter, is the account of the sounds of the heart given by M. Cruveilhier, derived solely from the observation of the heart of a new-born infant, which,

the contrary, the natural sounds are indistinct, or considerably altered, being too faint to be audible in the usual position, or superseded (not merely masked) by abnormal murmurs,—then, whether there be loud murmurs or not, whether there be palpitation or irregular action or not, whether the impulse be strong or weak, it may be inferred that the heart's action is seriously impaired; and the lesion must be considered of a dangerous kind.

I have notes of more than a score of cases, such as the following:—A physician of eminence was consulted on account of a young lady, who had a slight pain in the chest, with moderate palpitation. On applying his ear to the chest, he heard so loud and harsh a cardiac murmur, that he was alarmed, and recommended that I should see her. On examination, I found a very loud, grating systolic murmur, having its greatest intensity to the left of the sternum, between the second and third ribs, where there was a palpable thrill. According to Dr. Hope's rules of diagnosis, this must have been situated in the pulmonary artery; but finding the murmur distinct also in the carotids, I considered it to be in the aortic orifice; this opinion was confirmed by a perceptible thrill in the pulse. But it is more to the present purpose, that this murmur, loud as it was, did not supersede the natural double sound; and the impulse, although stronger and more heaving than natural, was not far beyond its proper position. I judged, therefore, that there was no present danger; and the regularity and moderate frequency of the pulse, as well as the absence of other serious symptoms, pointed to the same conclusion. This lady had some years previously suffered from some inflammation in the chest, and had ever since felt more or less palpitation on over-exertion. Such an exertion was the cause of her present ailment, which, to her own feelings, subsided after some days' rest and the use of very simple remedies; yet the murmur remained nearly as loud as ever. After being directed to pursue the rational plan of caution against all circumstances likely to derange the circulation or general health, this lady returned to the country quite well, and pursued her usual occupations and amusements. This was six years ago; I have seen her three or four times since, enjoying her usual health; but the murmur remained nearly as loud as ever. In this case, I consider that there was a small body projecting into the aortic orifice, and that, although causing noisy vibrations in the current, it did not oppose the passage of the blood sufficiently

---

from deficiency of the walls of the chest, lay exposed to view. Some years ago, I saw a precisely similar case at Bristol, with Dr. Symonds and Dr. O'Brien; and to show how little observations in such a case are to be relied on, I may state, that although we were all well practised in the examination of the heart, we could not agree as to the order and succession of the motions and sounds in the turbulent little object before us. In fact, with a heart beating from 130 to 160 in the minute, and in continual motion, it is not possible accurately to analyse the visible or audible phenomena. It is no wonder that, in such a case, M. Cruveilhier should deny that there is any period of rest; but I do wonder that he should have applied the same inference to a healthy heart, soberly beating some 60 or 70 per minute. All my best observations were made on the hearts of large animals, when they were beating slowly but vigorously, and every movement and sound could be deliberately noticed. Under such circumstances, the true relations of the motions and sounds soon display themselves clearly; and being once well perceived and understood, the phenomena become familiar and easily appreciable, even in cases of greater difficulty.

to disorder the proper action of the heart and its valves. Hence these, in their usual transition from slack to tight, in systole and diastole, still produced their natural sounds; which were thus a proof of the sufficient integrity of the heart in its functions.[1]

The following case of regurgitant aortic disease bears on the same point. A man, aged about thirty, who had formerly suffered from acute rheumatism, was admitted into the hospital for a slight ailment, attended with palpitation. The remarkable feature of his case was, a very loud musical murmur, of a cooing tone, following the second sound. Although most intense at and near the midsternum, it was distinct in every part of the chest; it could be heard not only in the arteries of the neck, but faintly even in the radial artery of the wrist. This patient was quite a stethoscopic curiosity, and was kept in the hospital on that account, rather than because he required special treatment. Accordingly, the natural sounds of the heart were quite distinct,—proving a fair performance of the natural function; although the systole, in its duller sound and extended and lifting impulse, implied some degree of hypertrophy of the left ventricle. As far as regarded the heart disease, therefore, in spite of the loudness of the morbid sound, the prognosis was not unfavourable; and we learned from his history, that for several years the noise in his chest had been noticed, when his health had not materially suffered. It happened, however, unfortunately, that he took a prevailing typhus fever, and died in the hospital. On examination of the body, the ventricles were found moderately enlarged and thickened, and the valves all healthy, except the aortic, one of which had the free margin neatly retroverted, so as to leave a fine, smooth chink for regurgitation. Some of those present at the examination, expressed themselves disappointed at finding so little lesion to account for so remarkable a sound; but, considered acoustically, it was precisely calculated to explain the sign, by affording a narrow slit for a uniform refluent jet, producing the rapid, equal, and prolonged vibrations, which constitute a musical tone.

Instances of noisy mitral regurgitation, without dangerous heart disease, are still more common. I have a great many patients on my books, whom I have occasionally seen for several years past, who have the systolic murmur below the left breast, which, in 1835, I proved to be characteristic of mitral regurgitation; and which, provided it merely accompany, and do not greatly supersede the natural double sound of the heart, is by no means so formidable a sign as is generally supposed. In some of these cases, the patients complain less of their heart than of their breath, or their digestion, &c.; in others, nervous palpitation or pain is a troublesome symptom, and aggravates the sufferings and fears of the invalid: but none of these symptoms are adequately proportioned to the cardiac lesion; and they may come and go, whilst this is constant.

---

[1] This is my explanation of the natural sounds, inferred from the experiments before referred to. The ventricles, with their valves, at each systole, are suddenly tightened on the contained blood, and thus produce the first sound, which is more or less prolonged till the vibrating, and therefore sonorous tension, ends in the diastole: then the ventricles are relaxed, but the parts suddenly tightened now are the arterial valves, which simultaneously closing under the recoiling column of blood, give the second or diastolic sound.

But so long as the natural sounds of the heart are distinct, and the impulse does not spread far beyond its natural limits, although the murmur be loud and the symptoms distressing, we need not despair of amendment and restoration to moderate health.

In all cases, however, in which the existence of a valvular lesion is proved by the persistence of a murmur, the prognosis must take into account not only the present amount of the lesion, but what it is likely to become; whether it be stationary or progressive; and whether, although now it do not seriously affect the ordinary work of the heart, as evidenced in its motions and sounds, it may not be so increasing, as to tend to interfere with them, and thus to develop dangerous disorder. To determine this point, we have to consider the recent history of the case, and watch its progress for some time. Thus, if symptoms of disordered action of the heart have manifested themselves only recently, in consequence of an accident, a sudden mental shock, or an inflammatory attack in the chest, then it is possible that the disease, although moderate now, may be on the increase; and even in a case of slight lesion, a favourable prognosis cannot be pronounced, until further observation shall prove that there is no tendency to increase. But if the history give no evidence of a sudden or recent affection of the heart, and if examination, repeated after the lapse of a week or so, discover no remarkable variation in the physical signs, it may be inferred, that the lesion is stationary, and may be considered less formidable in proportion as the natural sounds remain unaffected.

With the cases above described, as presenting through their physical signs a favourable prognosis, may be contrasted those of an opposite description, equally declaring themselves by their physical characters. We have seen that it is not the loudness nor harshness of the morbid murmurs, that proves the formidable nature of a cardiac disease; but rather the degree and mode in which natural sounds are superseded, or changed from that type in which they represent a healthy working organ. Thus when, instead of the natural first sound and impulse, there is only a soft blowing or musical murmur, with little or no impulse, or when a murmur of any character supersedes completely the natural second sound,—we have, at once, the proof of a serious and dangerous alteration of structure: and this is commonly, but not constantly, evinced by faintness, distressing palpitation, or irregular action, with other symptoms of failing function in the centre of the circulation. The most formidable cases of this description, are those in which the valves of an orifice have been broken down, either by some violent exertion, or by a sudden increase of endocarditis or degenerative softening. I have met with several examples of this kind. There had been the signs of a moderate lesion previously,—a murmur accompanying one or both natural sounds; when, after a violent strain, or excessive mental excitement, sometimes with the sensation of something suddenly giving way, the action of the heart becomes tumultuous and irregular, with more or less faintness or oppression; and the sounds of the heart are found to have become changed, the natural sounds being indistinct, the rhythm irregular, and the murmur altered in character, but not always increased in intensity. In other instances, a similar change has occurred less suddenly, but still within a few days, by the rapid destruction resulting from

acute endocarditis, or from fatty degeneration of the valves; in such cases, general symptoms of cachexia, and of serious disorder of the blood and excernent function are also present, to give warning of the impending danger; for destructive endocarditis, and degeneration of textures, do not occur in a healthy constitution. But the change in the sound of the heart is here all the more sure token of evil, and the sufferer seldom survives many days, or weeks at furthest.

When the lesion of the valves is slower in progress, and only gradually impairs the natural sounds, its fatal influence is often successfully counteracted, for a time, by the powers of nature. This they can do in slow cases, by developing increased strength and substance in the muscular walls of the heart. The more this is done by simple hypertrophy, without degeneration, or much dilatation, the better will it accomplish its end,—the augmentation of the damaged power of the heart to propel the blood. It is thus that we sometimes find the most formidable kinds and degrees of organic disease of the heart *gradually* developed, without sacrificing life, and, occasionally, without altogether precluding a limited amount of health. We do, now and then, meet with examples of most frightful amounts of change of structure—the normal sounds superseded by all kinds of unnatural blowing, sawing, or grating noises —the impulse exaggerated into a wide, tumultuous heaving stroke, which, with its almost equally violent diastole, so shakes the walls of the chest, as to give a shock to the whole frame; yet the patients complain of little or no palpitation or discomfort,, and have far less of suffering or fear, than most of those persons who are affected with merely functional disorder. By substituting increased force for completeness of mechanism, nature does manage to compensate for the defects for a while, and, under favourable circumstances, to maintain the circulation to a degree that is surprising, considering the amount of the lesion. But this compensatory power is very uncertain and unruly; it is very apt to exceed its due bounds, and further to damage the heart and adjoining vessels by its violence; or to falter and suddenly fail, when exhausted by an unusual effort: so that even these cases, the best of their class, hold life by a very uncertain tenure. The machine, working at a high pressure, to which it is not adapted, may suddenly stop from the expenditure of its power, or soon become worn out by the strain; and thus we are justified in applying a more or less unfavourable prognosis even to chronic cases, where the natural sounds of the heart are materially impaired.

In many cases, the compensatory efforts of nature are even less successful than in those last noticed; the hypertrophy of the walls is frustrated by dilatation, which implies the expenditure of the force on the cavities; or it is vitiated by fatty degeneration, which not only deprives the muscular fibres of their contractility, but renders them yielding and lacerable, and liable to functional failure or fatal rupture. Hence, a dilated flabby heart is the worst addition to valvular disease, and may render formidable even that which is not in itself dangerous. In this case, the systolic sound may be distinct, and even loud, and heard over a wide extent; but it is short, and with the brief knocking impulse, expressive of the deficiency of contractile power. The rhythm is commonly irregular, and the pulse very weak and unequal.

2. The second group of circumstances that affect the prognosis of organic diseases of the heart, are those relating to the Condition and General Circulation of the Blood.

The mechanism of the heart is adapted to certain degrees of spissitude and quantity of the blood, and the vital properties of the organ are sustained by its richness and purity. Any considerable deviations from the normal state of the blood, will disorder the action even of a healthy heart, much more that of one, the structure of which is imperfect. Thus, a thin watery state of blood will mechanically exaggerate the unnatural vibrations and regurgitations arising from valvular disease, and will increase the murmurs which these occasion; whilst the vital properties of the heart, being alternately irritated and exhausted by the irregular quantity and quality of its sustaining fluid, will be still further disordered, and raise the functional disturbance to its greatest possible height. Hence there are no cases which are more distressing, or seem more alarming, than those of valvular disease combined with *anæmia;* and many such instances have I seen, reduced to this condition by the injudicious employment of an antiphlogistic or lowering treatment. But so long as the natural sounds and impulse of the heart are distinct, and there is no evidence of a worse complication than anæmia, although the murmurs may be very loud, the palpitation very violent, the occasional faintness distressing, and all manner of anginal pains and oppression be present, and even although anasarca may have begun to appear, yet these cases are by no means hopeless. In many instances, they improve so much under a soothing and sustaining treatment (including sedatives, chalybeate tonics, and nutritious diet), that the patients sometimes think themselves cured: but the valvular lesion is still detected by its murmur, although its diminished intensity shows that it is of minor importance, now that a better state of blood has restored to the heart its proper sustenance. It may be inferred, therefore, that simple anæmia, although often greatly aggravating the symptoms, and exaggerating the signs, of heart-disease, is not a dangerous complication, if it be seasonably and properly treated.

The same observation will apply to *general plethora*, or simple excess of blood. This too, by exalting the vital properties of the heart, and by putting its mechanism to a strain, increases the intensity of the symptoms of organic disease; and, if uncontrolled, tends to spread its destructive effects. Under such circumstances, the prognosis is unfavourable only when the proper antiphlogistic and sedative treatment cannot be practised, or has been neglected too long: when these are judiciously and seasonably employed, the amelioration of the symptoms, and the diminution of the morbid sounds and impulse, are often very remarkable.

But the most common of all the complications of heart disease, and the most important to be considered in the prognosis and treatment, is that with *deteriorated quality* of blood. Cachexia and toxæmia, in all their varieties, uræmia, cholæmia, lithæmia (lithic acid in the blood), oxalæmia, pyæmia, and others, which it would be hard to name, might be exemplified from clinical experience as constituting prominent elements in the history of cases of organic disease of the heart, and almost stamping them with the proper indications for their treatment. The

subject is too wide to be discussed in full, it must suffice to take the more common examples of blood depraved by the retention of excrementitious matter in it.

Experienced practitioners have long been familiar with the fact, that in organic diseases of the heart, and, in fact, in most chronic maladies, it is of the first importance to attend to the state of the digestive organs, and to the secretions of the liver and kidneys. In truth, so prominent is this practical fact, and so manifestly does disorder of these several organs give occasion to the troublesome symptoms in the heart, that both practitioners and patients not uncommonly jump to the conclusion, that the true seat of the disorder is the stomach, or liver, or kidneys, and that the heart is only "sympathetically affected." The auscultator avoids this mistake; he is well assured, by the signs, that organic disease exists in the heart; but he will fall into an error of equal practical importance, if he neglect the consideration of those derangements of other viscera which react on the damaged heart, and render its imperfections more serious and distressing. The mode of their influence is, doubtless, in some cases, conveyed through the medium of nerves; and, therefore, may be called "sympathetic"; as where a bit of shell-fish or bitter almond in the stomach instantaneously causes palpitation or syncope, (this may happen without any organic disease, but it is more likely to happen with it). In other cases, the disturbing influence is merely mechanical; as where a stomach, inflated with gas, or distended with bulky crudities, presses on the heart; or where an enlarged liver has a similar effect. But most commonly, the medium which conveys the disturbing influence is the blood; loaded with morbid matters, resulting from bad digestion or imperfect excretion, it disorders the various organs through which it is distributed; and none more than the heart, whose injured structure makes it most susceptible of the disturbing influence: hence ensue attacks of palpitation or irregular action, and other symptoms of disturbance, which magnify a disease, before quiescent and scarcely observed, into a distressing and possibly dangerous malady.

Nor is the permanent affection of the heart unconcerned in producing the functional disorders which react thus severely upon it. These may be more or less owing to constitutional peculiarities, or accidental causes; but they are, in part, the result of the disturbed circulation connected with the cardial lesion. This always operates, in some degree, by inducing congestions or irregular flows of blood in the several parenchymatous organs. The lungs, the liver, the kidneys, and the mucous membranes, especially suffer from this disturbance; and, although insufficient to produce prominent symptoms, it sooner or later impairs or disorders their functions. Hence, we find the subject of organic disease of the heart occasionally, and in some instances almost periodically, suffering from biliary or stomach disorders; from asthmatic or catarrhal affections, or from some of those multiform rheumatic, gouty, and kindred ailments, that are connected with imperfect elimination by the kidneys. Any additional circumstances, tending further to lower the regular force of the circulation, may prove co-operating causes; such as exposure to cold, undue exertion or fatigue, irregularities of diet, and the like. And under their superadded influence, the exacerbation of the heart disorder will take place sooner, and with greater severity.

The primary pathological condition in the affected viscera thus induced by a heart disease, is generally congestion. Often we have the physical signs of congestion in the lungs, or liver, and, I may add, sometimes in the kidneys.[1] Their functions are then more or less impaired; and in no symptom have we better evidence of this, than in the state of the urine, which generally becomes scanty, high coloured, and occasionally turbid, and in severe cases, albuminous; less commonly, it is pale and watery. As this proceeds, the action of the heart is more deranged, until more or less of a paroxysm of inordinate or irregular action is developed, with the usual distress and increased disturbance of all the functions. Here we trace the influence of the defective excretion in impairing the quality of the blood, and in developing and aggravating the imperfections of the organ, which propels it. In the same cases conjointly, in others separately, the liver may likewise suffer, and in its increasing bulk and tenderness, it gives evidence of congestive enlargement; whilst, in many instances, a tinge of the conjunctiva, and even of the skin, porphuria, and various other signs of bilious derangement, affords proof of the presence of bile in the blood. Here the heart soon feels the deterioration of its proper stimulus; and faintness or irregular action, sometimes with a peculiar kind of breathlessness, is the consequence.

These secondary disorders, arising from imperfections in the heart, and reacting on and aggravating them, are, if opportunely and properly treated, quite tractable in connection with the more moderate degrees of cardiac lesion; but, if neglected, they tend to become inveterate and unyielding, and to involve the system in a state of constitutional disease and cachexia, which, in various ways, may hurry the malady to a fatal termination. In my *Principles of Medicine*, I have pointed out the most important steps in this process of extension and aggravation of disorder; and did space allow, I could cite numerous histories of cases, in exemplification of various modes of this progress: but to avoid the tediousness of detail, I will enumerate the several changes of structure and function, which commonly precede the fatal termination of organic diseases of the heart. Whilst the pathologist will not fail to perceive the mutual relations of these changes, the practitioner will recognise in their symptoms, phenomena long empirically known as "bad signs", marks of a "break up", indications of failing vitality.

The following Table contains the elements of the complications most commonly occurring in the progress of organic disease of the heart; and it is sufficiently obvious, that in proportion as these secondary lesions become permanent, they react on the original disease in the manner described, and both by aggravating it, and by injuring other functions, and the general health, they render the prognosis more unfavourable, and even to lesions of moderate extent may give a fatal tendency.

---

[1] The physical sign of congestion of the kidney is a temporary enlargement, ascertained by palpation through the walls of the abdomen in the supine posture. In persons that are not fat, I have generally been able to reach the body of the kidney by gradual rotatory pressure, which, by displacing the intestines, brings the flat of the fingers in apposition to the posterior walls of the abdomen. This mode of determining the size of the kidney is much more feasible than that by percussion.

SECONDARY EFFECTS OF ORGANIC DISEASES OF THE HEART.

ON THE LIVER.	CHIEF SIGNS OR SYMPTOMS.	COMMON RESULTS.
Congestion	Soft and varying enlargement	Increased secretion or deposits.
Deranged and interrupted secretion	Bilious attacks—jaundice, etc.	Cholæmia, malnutrition, dyspepsia, etc.
Interstitial deposits	Enlargement.	
——— soft—plastic	——— soft, uniform	Functional disorders, general weakness, etc.
——— ——— fatty	——— ditto	Cachexia, dyspnœa, general dropsy.
——— hard—granular	——— hard, irregular	Jaundice, cachexia, malnutrition, purpura.
——— ——— contractile	Size progressively decreasing, with rounded induration	Intestinal hæmorrhages, ascites, cachexia.
ON THE KIDNEYS.		
Determination of blood—congestion	Secretion first increasing, then diminished and albuminous or bloody—Lumbar pains and tenderness	Disordered secretion, temporary albuminuria, uræmia, etc.
Increase and casting of epithelial cells of tubuli	Soft enlargement—Urine diminished, and containing casts of cells and albumen	The same in a more confirmed degree.
Gradual filling of tubuli with common granular cells, sometimes degenerating into fat	Secretion less urinous, more albuminous	Permanent albuminuria, uræmia, and its consequences, cachexia, spanæmia, dropsy, etc.
Exudation on vessels, causing partial contraction and atrophy	Secretion less albuminous, more watery	
ON THE LUNGS.		
Congestion and determination of blood	Dyspnœa, cough, catarrhal expectoration. Obstructed breath-sounds, moist crepitus in back, wheezing, etc.	Pulmonary catarrh, or emphysema.
Interstitial deposits and obstructions of vessels	Confirmed dyspnœa. Signs as above, with partial dulness and tubular sounds	Hydrothorax and general dropsy, aggravation of heart disease.
Pulmonary apoplexy and consolidation	Increasing dyspnœa and and cough. Expectoration viscid, and sometimes bloody	
ON THE ARTERIES.		
Irregular distension—partial inflammation	Strong pulsation; sometimes murmurs. Pain or soreness. Jarring pulse	Excitement and derangement of function of part.
Deposits on the coats	Hard pulse—unequal	Irregular supply of blood, and liability to rupture, aneurism, gangrene, atrophy, or mal-nutrition.
Fatty and calcareous degeneration	Ditto	

(To be continued.)

7, Holles Street.
March 6, 1850.

ON THE THERAPEUTICAL USES OF TEREBINTHINATE MEDICINES.

By THOMAS SMITH, M.D., etc., Cheltenham.

It has often occurred to me, and I have no doubt even to the most cursory observers, how few of the medicines, out of our long catalogue of remedies, are really found to answer the expectation in the hour of need. The ills to which flesh is heir, are sufficiently numerous and oftentimes puzzling enough; but the means of combating them, are neither so ample nor so decisive, as the catalogue of our *materia medica* would induce us to believe. It may fairly be questioned, if the present generation has discovered (with the exception of chloroform) a single specific, or invented any new remedy, however much it may have extended the use and improved the knowledge of the properties of those already known. Chemical science, it is true, has succeeded in isolating the active principles of some of our more potent remedies; but in accomplishing this, it has not, in every instance, rendered the concentrated preparation equally efficacious with the old. Quinine cannot always be considered as a substitute for bark; neither can morphine at all times be prescribed for the same cases, and with the same beneficial results, as opium. Notwithstanding these drawbacks, the chemist has been of essential service to the medical practitioner.

It is an excellent habit to review, at stated periods, our past practice; to compare the various epidemics and disorders which have occurred in our times, with those of past ages—to investigate their causes, the means which have proved most efficient in their treatment, and the reasons of the success or failure of our remedial efforts. On looking over my notes, I have been both pleased and gratified to find one class of medicaments which have rarely failed to answer the object for which they were prescribed. The Terebinthinate drugs have, from time immemorial, enjoyed a high reputation as valuable auxiliaries in allaying, arresting, or removing disease. In private as well as in public practice, I have prescribed them extensively, internally and externally, in the forms of potion, liniment and lavement, with the happiest results. Hence I naturally feel a strong partiality for their employment. I have had sufficient opportunity for testing their utility, in upwards of seven hundred cases; and I do not recollect an instance of any unfavourable symptom supervening on their exhibition, except in the following case: An aged female, who had repeatedly taken large doses of turpentine for the expulsion of tapeworm without effect, applied to me for advice. I prescribed the following; ℞ Olei terebinthinæ ʒi; olei ricini ʒss;—fiat haustus. To be taken directly, and repeated in three hours. Shortly after the second dose, she complained of vertigo, and vomited profusely; violent hypercatharsis followed, with intense pain in the region of the kidneys; and the worm was voided two hours after the second dose. In forty-eight hours, she had completely recovered from these unpleasant symptoms; nor had she ever, to my knowledge, occasion to regret the severity of the means adopted for her relief.

The silence of writers on forensic medicine on the injurious conse-

quences, resulting from an overdose of the oil of turpentine, may be considered as a strong corroborative testimony in its favour. Christison has never heard of a fatal case. Mr. John Headman, however, mentions the case of a woman sixty-one years of age, whose death was occasioned by this drug in twenty-five days—dose not stated. Dr. Duprés is supposed to have fallen a sacrifice to inflammation of the urinary organs, occasioned by too large a dose of this drug, continued for too long a period.

History. The Terebinthinate drugs have, for centuries, had a high and distinguished place in the *materia medica*. They belong to a family, of which it has been justly observed by a writer in the *Dictionnaire de Matière Médicale*, "C'est une des plus importantes du règne végétal sous le rapport de ses produits, tous doués de beaucoup d'activité."

In the works of Hippocrates, Celsus, Dioscorides, Aretæus, Avicenna, Rhases, Galen, Serapion, Boerhaave, Van Swieten, etc., we find frequent allusions to the Turpentines. The name, derived from the Greek τερέω, (I bore or perforate), in reference to the way in which it was obtained from the tree, evidently implies a knowledge of the liquid species. In that state, I believe it to have been generally used as an internal remedy. Aretæus distinctly alludes to the liquid form, and recommends it as useful in enemata; he prescribed the Turpentines largely in various maladies, and like the Roman Physician, Celsus, considered them especially valuable in pectoral disorders. Pliny, like Dioscorides, divides the Turpentines into two species, "Gummæ species duæ, sicca et liquida." In the polypharmacy of the middle ages, the Terebinthinates and balsams constituted some of the most active ingredients of which their multitudinous formulæ consisted.

Towards the close of the seventeenth century, the Turpentines, like many other medicines of intrinsic value, lost their ground in public estimation; nor was it until the dawn of the nineteenth century, that physicians deemed them of sufficient importance to be employed as internal remedies in the treatment of other diseases than those of the urinary organs. Yonge, and subsequently the celebrated Hunter, were amongst the first to revive their use as styptics. The Dublin physicians were not long in making trial of them in some of the most severe affections to which the human frame is obnoxious. In America, they have been proved to be of eminent service in many febrile diseases. In France, they soon attained a high position as remedies in neuralgic and rheumatic disorders. Amongst the Hungarians, they are considered a sovereign remedy against all kinds of coughs and bronchial affections. Some of the most eminent medical practitioners of Great Britain have, within the last thirty years, strongly insisted upon their use in almost every malady for which they had previously been regarded by the ancients as most efficacious. Without disparaging the labours of others, the meed of praise is justly due to Dr. Copland for the high reputation which the Terebinthinate preparations have now attained.

Physical and Chemical Properties, and Mode of Preparation. In the market, there are several kinds of drugs known by the name of Turpentine; and, though differing in many distinctive peculiarities from each other, they nevertheless, in essential properties, are dependent

upon the same principles—a volatile oil and a resinous residuum. The true Turpentines are distinguished from the balsams, with which they are not infrequently confounded, by the former containing succinic acid, the latter benzoic. In distilling these Turpentines over caustic lime, a very pure spirit is obtained, of low specific gravity, to which the name of camphine has been applied, and which is now pretty extensively used for the purpose of giving light in private dwellings, in lieu of oil. The greater portion of the common Turpentine which is met with in this country, is imported from America, and is chiefly procured from the pinus palustris, in the following manner. A portion of the tree is scooped out, a short distance from the ground, and the bark is removed for several inches above. During the summer months, the Turpentine flows into the hollows thus formed, and is then collected for exportation. It has a warm acrid bitterish taste, a peculiar aromatic odour, is of a soft consistency, and of a yellowish white appearance. Oil of Turpentine is obtained from this substance, by distilling it with water in an ordinary common still. Oil or spirit of Turpentine, as it is frequently called, when prepared according to the directions of the *London Pharmacopœia*,—that is, by adding four parts of water to one of oil of Turpentine, and carefully distilling, ought to have a specific gravity 0·86 at 60 Fah., to boil at 314, to have a slightly acid reaction, and to be completely soluble in six parts of sulphuric ether. This oil is quickly dissolved by hot alcohol, but readily separated in drops as the spirit cools. Oil of turpentine is considered by Blanchett and Sell, to consist of two isomeric oils, dadyl and peucyl; but as the boiling point of oil of Turpentine is less than the boiling point of those two oils, Pereira treats them as educts, not products. An artificial camphor may also be obtained from highly rectified oil of Turpentine, by passing a stream of oxygen gas through it. The analogy between camphor and oil of Turpentine is very strong,—the leading characters of the former being those of a concrete volatile oil.

Pure oil of Turpentine for medical purposes ought always to be distilled over caustic potash, lime, or soda. A specimen of the oil thus prepared by Mr. Bullock, operative chemist, Conduit Street, which is now lying before me, is perfectly pure, neutral, has rather a sweetish taste, and a peculiar aromatic odour; and when its flavour is disguised by a small quantity of the essential oil of bitter almonds, it is not particularly disagreeable to the palate. This oil of Turpentine, as prepared by Mr. Bullock, is very different from the camphine of commerce, which, though neutral and of very low specific gravity 0·60 (Price's), has a disagreeable saponaceous taste. As an external counter-irritant, it is much more rapid in its action than oil of Turpentine, and I always prefer it where it can be obtained, where it is important to produce severe or immediate counter-irritation. Perhaps one of the objections against the daily employment of the oil of Turpentine in cases specially adapted for its use, may have arisen from its nauseous flavour, and its tendency to impart its odour to the eructations which it not unfrequently occasions. To obviate these inconveniences, Dr. Nimmo, of Glasgow, proposed a method of freeing oil of Turpentine from all unpleasant taste and smell, by a very simple process, without sacrificing any of its essential properties. There can be no doubt that oil of Turpentine, prepared according

to this plan, may be kept for several months. I lately possessed a specimen of the oil, devoid of all unpleasant odour, of which it had been deprived more than six months previously. Oil of this description, when exposed to light and air, very soon re-acquires the peculiar Terebinthinaceous character; it ought, therefore, to be preserved in small bottles, well-corked, each containing not more than half an ounce each, and only used for extemporaneous prescription. When flavoured with any essential oil, such as lemon, cinnamon, verbena, or prussic acid, it may be taken, without creating the slightest inconvenience, or disgusting the most fastidious palate. To render this medicine free from smell or taste, take eight parts of purified oil of Turpentine and one part of the strongest alcohol; agitate briskly, and then let it stand some time; pour off the alcohol, then add a fresh quantity to the Turpentine; proceed as before, and repeat the process until it has lost its peculiar taste and smell. Turpentine, when thus prepared, leaves no residuum on evaporation.

According to Pereira, the ultimate composition of the purified oil of Turpentine, is

20 Atoms of Carbon—6×20	...	120
16 ,, Hydrogen ...	...	16
		136

Nitric acid resinifies oil of Turpentine; and the resin, after long boiling, is converted into crystals of Turpentine acid.

Chian or Cyprus Turpentine is very often prescribed by some practitioners where the Terebinthinates are indicated, because it does not possess the same unpleasant taste, and easily can be given in the form of pills. Though I have prescribed it frequently, I have never found it so useful as the essential oil, in some states of the bladder and urinary organs. This kind of Turpentine, the Canadian balsam or Venice Turpentine, may have advantages; but, as a general rule, when the medicine is deemed requisite, the purified oil ought to be given.

Physiological Effects. Turpentine, when taken internally, exerts a peculiar action on the mucous surfaces, and the tissues superimposed upon them: it increases the peristaltic motion of the bowels, inducing purgation, and, in very large doses, hypercatharsis; it promotes the flow of urine, impregnating it with a violet odour; and if its action be specially directed to the kidneys, may produce strangury and bloody micturition. It determines to the skin, producing copious and free diaphoresis, sometimes attended with an itchy eruption. It also taints the pulmonary exhalation with its characteristic smell. A large dose has been taken internally, and failed to produce action of the bowels or kidneys; the vapour of the Turpentine has then been discharged through the skin and pulmonary organs; this was the case with the experiment that Dr. Copland instituted upon himself. I once gave half an ounce to a boy of sixteen years of age, which occasioned no other unpleasant symptoms, than an increase of the respiratory movements, and acceleration of the circulation, with a tendency to somnolency, followed by a profuse discharge from the urinary organs. The breath and perspiration were tainted with a Turpentine odour for upwards of a week; the bowels remained inactive until he had taken

eight ounces of the compound infusion of senna, with ten grains of calomel: the evacuations when passed were extremely fœtid, black, and slimy, but giving off no smell of Turpentine. Hertwig injected two drachms into the veins of a horse; trembling, reeling, with inclination to pass stools, and frequent micturition ensued. Fever and bronchitis were set up, and the animal died in nine days. Schubert found that two drachms given to a dog caused tetanus and death in three minutes. I once saw half a drachm administered to a young cat: the poor creature mewed piteously, was extremely restless for several hours, and had constant micturition, unaccompanied with diarrhœa; after some hours, it fell into a profound lethargy, from which it awoke perfectly well; its eyes remained injected for several days.

Turpentine seems peculiarly destructive to vegetable existence. Small insects are speedily destroyed by it; indeed, no other drug appears to exert so fatal an influence over the majority of parasites which infest animal and vegetable life.

When taken internally, it has been detected in the various secretions of the human body. Todd and Johnson have met with it in the kidneys of a patient who died from hæmorrhage; it has also been detected in the chyle of a dog and horse, to which it had previously been administered, by Tiedemann and Gmelin.

Therapeutical Effects. The diseases for which Turpentine has been prescribed, and which have been materially relieved by it, are extremely numerous; there is scarcely one, whether acute or chronic, sthenic or asthenic, which has not been successfully treated, if the testimony of some of the first practitioners of the age is to be credited, by the medicine under consideration. It would be a useless task to cite all the cases and all the maladies, in which the admirers of this drug have found it advantageous. Suffice it to say, that in every instance, where prejudice has not interfered, and where ignorance has not prescribed, this drug has obtained favour and proved itself a faithful friend.

In passing in review the numerous disorders for which it has been ordered, as I wish this paper to have a practical bearing, I shall dwell as briefly as possible upon all those which have not come under my own immediate observation. Those who desire a more extensive acquaintance with the nature, properties, and uses of this drug than is to be met with in these sketches, will do well to consult the pages of our monthly and weekly periodicals, which, for the last thirty years, have occupied a prominent place in the medical literature of Europe and America. The writings of Dr. Copland, Paris, Pereira, Eberle, Thompson, Brande, etc., the *Dictionnaire de la Matière Médicale*, and the records of ancient medicine, contain an amount of valuable information regarding the properties of Turpentine. In common with other medicines, its therapeutic effects are liable to be modified by numerous circumstances: viz., the seasons of the year, the idiosyncrasies, age, or sex, of the individual, the special or general cause of the malady, or its occurrence before, or subsequent to, any general or universal epidemic.[1] From a neglect of these pre-

[1] It is a remarkable fact, that after any severe visitation, such as epidemic cholera, the human frame undergoes an extraordinary change. Many will, I have no doubt, recollect how general was the custom to abstract large quantities of blood in fevers and inflammatory disorders previous to 1831. Venesection was the prac-

cautions, many really valuable remedies have, though somewhat undeservedly, fallen into disrepute.

As a rapid and safe *counter-irritant*, there is no drug more efficacious than warm oil of Turpentine or camphine. I have never known an instance of its acting injuriously when thus applied; it never produces strangury or any uneasiness of the urinary organs, like preparations of cantharides; and here I fully coincide with the opinion expressed by the late Dr. Ryan, that when counter-irritation is deemed imperatively necessary in severe acute diseases, as cerebritis, hydrocephalus, pneumonia, enteritis, peritonitis, or hepatitis, it is an extremely inert and unjustifiable practice, to wait for twenty-four hours for the irritating effects of a blister, when the same may be produced in as many minutes by epithems of warm oil of Turpentine.

Veterinary surgeons have condemned the external use of Turpentine as an epispastic; it has been asserted that, when applied to the horse, it prevents the hair from growing. I do not think this correct. Some years ago, I had a grey mare, which was seriously injured about the head and fore legs by an accident. Contrary to the recommendation of my veterinary surgeon, who insisted upon the application of tincture of myrrh, and greasy unguents containing gunpowder, I determined for once to try the experiment, if an injury to a horse might not be remedied by the same means as one in a human subject. I had the wounds carefully fomented and poulticed, and afterwards applied an ointment, consisting of resin ointment, and oil of Turpentine. The animal recovered without any material disfigurement. Last year I had a black horse consigned to me by a friend in Yorkshire, which met with a severe accident in its transit on the railway. The horse was treated in the same way as the one above, and in a few months was perfectly restored, without any other blemish.

The liniment, by means of which the celebrated quack St. John Long was supposed to have performed miraculous cures, was a mixture of the oil of Turpentine, pyroligneous acid, and yolk of egg.[1]

As a *vermifuge*, turpentine has been given in the form of Chabert's oil. This is made by mixing one part of the empyreumatic oil of hartshorn, with three of oil of Turpentine, allowing them to stand for

---

tice of the day. On the advent of the epidemic influenza of 1833, general bleeding, even in maladies of a high phlogistic character, could not be adopted with safety; numerous lives were doubtless sacrificed, ere this change in the human constitution,—its inaptitude to bear excessive depletory measures, was fully appreciated and understood. We are now approaching an epoch (if we have not already entered it), in which the vital phenomena of the animal organism will manifest themselves differently under the influence of remedial agents. If my observation does not deceive me, I am inclined to believe that this great climacteric change, on the completion of the cycle of the late formidable and universal epidemic, will mainly develop itself, by inducing a lax condition of the intestinal tube. I have noticed, that patients who have been accustomed to take large quantities of aperient medicine, now rarely require it; and when it is needed, a smaller portion is found sufficient. This is not confined to the aged, for even in children I have witnessed a similar alteration in their former habits.

[1] This liniment is an excellent counter-irritant. We used it as an external stimulant in some cases of cholera during the past epidemic, as recommended by Dr. James Bird; and we frequently employ it as a counter-irritant in phthisis, and other chest diseases. EDITOR.

three days, and afterwards distilling off three-fourths of the mixture by the aid of a sand bath. It very soon becomes blackened, by exposure to the air, and therefore ought to be kept well corked, and excluded from the light. It is extremely nauseous; and, on that account, is not likely to come into general use.

As a *purgative*, Turpentine ought never to be administered alone, in large doses, during the winter, or in cold damp weather: because, under these circumstances, it tends, in common with other hydrocarbons, to supply fuel to the body for the evolution of animal heat, rather than exert any therapeutic property. Indeed, I very much question the propriety of giving it alone, as a purgative, under any circumstances whatever. There are some writers who do not hesitate to recommend it in doses which I consider unjustifiable. In winter, cerebral congestion may supervene; in summer, intractable diarrhœa, from over-excitement of the mucous membrane of the bowels. The case of Dr. Copland furnishes an instructive example on this head: ten drachms of the oil of Turpentine were swallowed, and failed to induce action of the bowels or kidneys; the consequence was, high cerebral excitement, followed by a train of unpleasant symptoms, which it would be dangerous, in some constitutions, to excite.

Turpentine is, however, often a valuable addition to other purgatives, as it possesses the faculty of increasing their activity in a remarkable degree. I have known a lady, who, for forty years, was unable to procure an evacuation without the most drastic purgatives. She succeeded in obtaining daily action, by the simple combination of a teaspoonful of castor oil with ten drops of oil of Turpentine. I have had another case under my care, where the same combination enabled me to relieve the augmented suffering occasioned by obstruction of the bowels from chronic meningo-myelitis of several years duration.

Whatever may be the object for which Turpentine is exhibited as a purgative, whether for the expulsion of parasites infesting the human body, or as a revulsive in cerebral affections, the dose should never exceed half an ounce at one time; and to ensure its purgative action, it ought to be united with some other aperient, as castor oil, compound infusion of senna, sulphate of magnesia, or the decoction of the bark of the root of the pomegranate. If prescribed in the above dose, in conjunction with any other active purgative, we run little risk of inducing strangury, or any other unpleasant symptom. It may be repeated at intervals of four hours, with perfect safety. Though some authors have stated that the dose of the oil of Turpentine may be from half an ounce to two, or even four ounces, he must be a very bold practitioner, who would take this suggestion for his guide. If the first-named quantity will not suffice for the destruction and consequent expulsion of a tænia, a larger amount given at one time, will equally fail; for it is not by the aperient properties alone of the medicine, (as I shall hereafter shew) that the death of the worm is effected.[1] As a *diuretic*, the dose may

[1] There may be special cases, but they will be extremely few, in which an extraordinary dose of any particular medicine may be peremptorily called for by the condition of the patient. For instance, I once gave to a man labouring under delirium tremens, seven grains of the acetate of morphia, in divided doses, within two hours, ere I could allay the inordinate and convulsive movements, and restrain

be from five to thirty drops, taken in any aromatic water, or mineral saline. I have rarely found patients object to its use, when exhibited with the salines of either Cheltenham or Harrowgate; and the numerous cases in which I have prescribed it, in conjunction with the waters from these mineral springs, have convinced me, that this union is especially indicated where we are anxious to direct its influence to the renal organs.

As an *astringent*, in doses varying from 20 minims to a drachm, according to the urgency of the symptoms, and repeated every three or four hours, Turpentine is one of the most efficacious remedies which we possess. The best vehicle for its administration, in the first place, is water, flavoured with syrup of orange, or any other agreeable aromatic. It may afterwards be advantageously combined with any other therapeutic agents, which the special nature of the case may require: thus, in epistaxis depending upon rupture of one or more small vessels, and where much arterial blood has been lost, muriated tincture of iron will form a valuable adjunct. In hæmatemesis and other sanguineous discharges from the bowels, it may be united with compound infusion of roses, sulphate of magnesia, iced-water, and solutions of tannic or gallic acid. In some forms of hæmoptysis, it may usefully be added to infusions of matico; in hæmaturia, to the decoctions of uva ursi, chimaphila, pyrola, etc.; or to tincture of sesquichloride of iron, etc. In purpura hæmorrhagica, the decoctions or infusions of the barks form with it an excellent adjuvant. In hæmoptysis, it has speedily and effectually arrested the hæmorrhage; and is a much safer remedy than lead.

In my experience, there is no single medicine in the materia medica, that can be compared with it as a *styptic*, either as to certainty of action, or to the safety of its effects. It is compatible alike with acids and alkalies.

The *external use* of Turpentine has been very general for a great number of years, alone or combined with other rubefacients, such as mustard, strong liquor ammoniæ, pyroligneous acid, cajeput oil, wine of hellebore, colchicum or opium, tartar emetic, croton oil, etc. It has very frequently been found of permanent utility, when applied as a warm epithem to the skin in pulmonary affections. Its action is twofold; first, it induces rapid though often transient counter-irritation; secondly, its vapour is inhaled into the lungs, and by its constringent operation on the extreme capillaries of the pulmonary texture, is not infrequently productive of great relief in some affections of these organs. For the purpose of inhalation, I am in the habit of dispersing its vapour through the room by evaporating water containing a portion of it, by the aid of a spirit lamp. When thus diffused through the atmosphere, it may be breathed for two or three hours in the course of the day, by the most delicate-chested person, and often with the most marked and striking amelioration of their pectoral symptoms.

---

the shrieks of the wretched sufferer. Again, at another time, I exhibited to a female, in the presence of Dr. Logan, twelve ounces of sulphuric ether, when the principles of etherization were first introduced, and kept this woman in a state of insensibility for upwards of six hours. Although both these cases did well, they are exceptional ones, and ought never to be imitated, except in emergencies of the most urgent description.

Long after the patient has left the room, he is conscious of the taste and smell of the turpentine. I have often detected its presence some hours after he had been submitted to its penetrating influence. I have also employed camphine in the form of a bath, mixed with common soda; or two pounds of the latter with from quarter of a pint to half a pint of camphine, and half an ounce of oil of rosemary, will form an excellent bath. In delicate skinned patients, females and children, ʒii of camphine will be sufficient. I may remark, *in limine*, that the alkaline camphine bath possesses virtues peculiarly its own. In the coldest day in winter, as I have verified in more than one instance, it may be employed with the most perfect safety. Whilst the individual is in the bath, he experiences, to my knowledge, no disagreeable annoyance from the disengaged vapour; on the contrary, if we except the taste of the Turpentine, which for some time remains in the mouth, a sense of calmness and tranquillity very often follows a previously disturbed, irregular, or excited condition of the respiratory or sanguiferous systems. After five minutes recumbency in the bath, the pulse is found to become fuller, softer, and slower; I have seen it fall from 100 to 80. The respiration also becomes freer, deeper, and less laboured. On coming out of the bath, the whole skin has a peculiar velvety, soft, and agreeable feeling; the breath is strongly tainted with the terebinthinaceous odour. If it have not been too hot, a pleasurable tingling warmth is experienced throughout the whole cutaneous surface; and this, with the preceding symptoms, may continue twenty-four hours. One great advantage of this bath will be found in the circumstance, that it may be employed at a heat from 10 to 15 degrees below the temperature of the ordinary warm one, without inducing that sensation of chill to which some delicate constitutions are so peculiarly obnoxious; ten or fifteen minutes is the length of time a patient ought to remain in a bath of this description. In the first instance, it is well for patients to commence with a smaller quantity of the Turpentine and soda, say a pound of the latter with two or three ounces of the former, and gradually increase its strength on each repetition of the bath, to the first mentioned proportions. This bath may be taken every second or third day, according to the urgency of the symptoms and the nature of the affection for which it is prescribed.

I come now to a more particular enumeration of the maladies for which Turpentine and its preparations have been chiefly recommended. They are—sanguineous exhalations from the mucous surfaces, epistaxis, hæmoptysis, melæna, purpura hæmorrhagica;[1] consumption, chronic bronchitis, mucous or purulent discharges from the urethra;[2] grubs infesting the urethra, tænia, ascarides;[3] typhoid, yellow and puerperal fevers, plague;[4] abdominal obstructions, strangulated hernia, tympanitis, colica

[1] Adair, Brooke, Cheyne, Clutterbuck, Copland, Elliotson, Hunter, Mageé, Nichol (W.), Thompson, Vincent, Younge.

[2] Aretæus, Celsus, Dioscorides, Van Swieten.

[3] Birkbeck, Cross, Fenwick, Fothergill, Gomés, Hancock, Hartle, Kennedy, Knox, Laird, Lettsom, Maldon, Mello, Ozanam, Pereira, Saner, Winstone.

[4] Atkinson, Blundell, Brenan, Chapman, Copland, Cullen, Douglas, Farre, Faulkner (Sir A. Brooke), Fernandez, Gooch, Hamilton, Holst, Johnson, Kinneir, Moran, Payne, Physick, Pritchard, Wood.

pictonum, biliary concretions;[1] traumatic tetanus, trismus;[2] apoplexy, hydrocephalus, acute and chronic, epilepsy;[3] neuralgia, sciatica, rheumatism;[4] diabetes, dropsy;[5] inflammations of the eye;[6] cholera, renal hydatids, suppression of urine;[7] burns, wounds, poisoning by prussic acid or opium, salivation.[8]

Illustrative Cases. My first observations will illustrate its efficacy in the Hæmorrhagic Diathesis. I do not coincide with the notion, that hæmorrhage, whether vicarious, or occasioned by a congestive condition of an overburthened viscus, is a salutary effort of nature, and that, therefore, caution is necessary in interfering with it. It has been my invariable aim to arrest a hæmorrhagic effusion as quickly as possible. We can in some measure calculate the worst consequences likely to arise from a general or local abstraction of blood; but we can never foretell what irreparable lesions nature may occasion by prolonged sanguineous exudation through an unnatural channel.

Hæmatemesis. This is a very common disorder, and often, when improperly managed, lays the foundation for a train of symptoms which not infrequently terminate in dropsical effusion. It has happened to me to have several such cases, principally among females, in which the usual treatment, by acetate of lead, mineral and gallic acids, etc., had been adopted. Since, however, I have given the Terebinthinates in this class of diseases, I have not had a single dropsical case supervening on the original malady.

Case I. Captain ——, 82nd foot, aged 64, was engaged in active service in India, and in the Peninsula, prior to the year 1812. He was of stout athletic constitution, six feet two inches high, and rarely if ever was known to complain, previous to an attck of fever, which he experienced at the close of the Peninsular war, and which led to his retirement from active military service. From that period to 1843, he was a martyr to anomalous and painful sensations in the præcordial region. The more prominent symptoms were—a short hacking cough, without expectoration; an occasional momentary pain darting from under the left nipple to the right shoulder, easily brought on by mental excitement; his temper, which had formerly been under control, now became irritable, fretful, and peevish. The functions of the bowels were performed with regularity; the appetite in general was good; his sleep short and disturbed. For a very long period, these symptoms continued without any material alteration, though he had tried a variety of remedies for upwards of twenty years, and had had issues of one kind or another in different parts of the body. About the year 1831,

---

[1] Boerhaave, Durand, Gibbon, Green, Guyton de Morveau, Hall (Marshall), Hamilton (C. B.), Kinglake, MacWilliams, Odier, Paris, Ramsbotham, Sewell, Sprengel.

[2] Gibbon, Hutchinson, Mott, Phillips.

[3] Latham, Lithgow, Money, Moran, Percival, Pritchard, Young.

[4] Bonnet, Cheyne, Ducros, Dufour, England, Hild, Home, La Roque, Lenton, Martinet, Maton, Pitcairn, Recamier, Thilenius.

[5] Darwin, Werlhoff,

[6] Burke, Carmichael, Foote, Guthrie, Hynam, Langier, Middlemore, Wright.

[7] Bayle, Copland, Neale, Pereira.

[8] Emmert, Geddings, Hanold, Heister, Jenkins, Kentish, King, Orfila, Paré (Ambroise), Percy, Pott.

he parted with a small quantity of blood, which greatly alarmed him, and for some weeks this continued with scarcely a day's intermission. On recovering from this attack, he found great difficulty in remaining quiet in a sitting posture. When in the house, he was constantly rocking himself in his chair. A see-saw motion seemed to be essential to respiration: if perfectly still, he complained of a feeling of suffocation. In 1837, he experienced a second attack of Hæmatemesis, of a more serious character. The hæmorrhage continued for several days, unrestrained by the remedies used. He was very much altered; convalescence was extremely slow, and he never regained his former status. It was a few months after this attack that I first saw him. His appearance was exsanguineous, lips livid, pulse 100, irregular and intermitting, respiration short and laboured. He was in constant motion, rocking himself to and fro in his chair, which he always had placed in a diagonal line between the fire-place and the open door. Even at meals, he continued the same to-and-fro motion, eating whilst rocking himself. His tongue was large, thick, indented, and compressed, palish, and mostly covered with a yellowish fur; the abdomen was exceedingly painful to the touch, more especially in the right hypogastric region. The bowels were easily acted upon by aperients. The evacuations were bilious, often dark and fœtid. The urine was high-coloured and scanty, frequently throwing down a lateritious sediment, sometimes attended with a pinkish deposit; sp. gr. 1·030. He had also swelling of the ankles; constant teasing cough, with mucous expectoration; occasional severe pain in the forehead; pain in the region of the heart. The physical signs were—chest sonorous; occasional mucous râle; extended dulness over the precordial region; *bruit de rape* most distinct on the right side, in a line upwards towards the sternum. Intensely severe paroxysms of dyspnœa now occurred at frequent intervals; these were relieved by local depletion and antispasmodics. There was œdema of the lower extremities; the urine was passed in small quantities. Towards the close of 1840, hæmorrhage from the stomach and bowels again recurred, with great increase of pain in the abdomen. In his debilitated condition, general bleeding was inadmissible; and even local depletion was not altogether unattended with risk. I prescribed ten leeches to relieve the abdominal inflammation, and ordered warm epithems of Turpentine to be subsequently applied. Turpentine enemata were also ordered to be administered twice daily, and the following mixture to be taken, in doses of two table-spoonfuls, every four hours: ℞ Infusi rosæ comp. ʒviiss; magnesiæ sulphatis ʒviii; mannæ optimæ ʒiv; olei Terebinthinæ purificati ʒiss. M. On the following morning, I found him much better; the bowels had been freely relieved, the pain had considerably abated, and there had been no return of the hæmorrhage. He expressed himself as feeling decidedly better, and had never experienced so much relief in so short a time from any medicine as from the Turpentine. He rallied from this attack rapidly; the swelling of the ankles decreased; the urine became light-coloured, of lower specific gravity, and more abundant in quantity; his complexion improved, and his spirits became more cheerful. He continued the Turpentine, in conjunction with the saline waters of Harrogate, for a considerable time, with marked amelioration of his more painful symptoms.

About three years after this, domestic troubles increased the disturbance of the heart. Peritonitis supervened, from which he sank in a few days.

The autopsy revealed a very large amount of disease. The heart was of an unusually large size; the walls of the right ventricle were much dilated and thinned; the mitral and tricuspid valves were extensively ossified. A small quantity of serosity was found in the pericardium. The lungs were healthy in texture, but slightly congested; the peritoneal covering of the bowels was extensively inflamed. The transverse arch of the colon was firmly attached to the lower surface of the stomach, and bands of adhesion (evidently of long standing) passed from it to several portions of the small intestines. In the stomach, were two small ulcerations near its pyloric orifice, and it exhibited small puckered places in several parts, evidently the result of some previous ulceration; there were also distinct patches of inflammation. The liver was a completely soft pultaceous mass, easily breaking down under the finger; it was of a bright yellow colour, and contained small pieces of a white friable calcareous matter. The kidneys appeared larger than natural, and much congested.

Case II. Mr. M., aged 36, of florid complexion, stout conformation, five feet ten inches in height, was seized on the 30th April, 1843, whilst superintending his men, who were removing some machinery in a mill, with a sensation of sickness and oppression in the præcordial region. Feeling himself very ill, he immediately desired to be taken home; but before this could be accomplished, he vomited a large quantity of blood. On my arrival at his house, whither he had been removed, I found him still complaining of considerable nausea. I immediately gave him ten grains of the acetate of lead, to be repeated every three hours, if the bleeding continued; infusion of roses with sulphate of magnesia and tincture of digitalis was also prescribed; and bladders of ice were ordered to be applied to the pit of the stomach. In the evening, I found him considerably worse; the tongue was very much coated, the pulse quick and thrilling, and he had severe pain, much increased on pressure, over the colon. To be cupped to twelve ounces; to continue the medicine, with the addition of a quarter of a grain of acetate of morphia to each dose.

May 1. Passed more blood during the night, and was extremely restless. Tongue very much coated with a brown yellowish fur; great thirst; pulse still quick and thrilling; bowels freely acted upon; evacuations dark, pitchy, and fœtid; urine high coloured. Whilst I was in the room with him, he became very sick, and again ejected a considerable quantity of blood. Before leaving the room, I gave one drachm of the spirits of Turpentine in a little water. I ordered him to discontinue the other medicines, and to take, instead, three tablespoonfuls of the following mixture every three hours. ℞ Infusi rosæ comp. ʒviiss; tincturæ digitalis ʒiss; magnesiæ sulphatis ʒvij; olei Terebinthinæ purificati ʒiss. M. In the evening, there had been no return of the bleeding; there was still severe pain in the head: the bowels had acted five times; the pulse was softer; the tongue much the same; thirst very great. To drink iced water, and to have ice applied to the head. To continue the mixture, and to have hot Turpentine applied to the bowels.

May 2. Better in every respect; no return of the hæmorrhage. From this day he continued to improve.

May 24. As there was some tenderness in the epigastrium, a seton was ordered. He was subsequently sent to Harrogate; and, under a course of the Cheltenham salines of that place, with small doses of Turpentine, he rapidly regained his health, and has continued well ever since.

Case III. F. H., aged 40, residing in St. Mary's Row, was admitted into the Leeds Public Dispensary, October 19, 1842. The following were her symptoms: pain in the forehead; swelling of the abdomen, without any particular pain; nausea, attended with sanguineous vomiting, small in quantity, occurring every two or three days, and which had already lasted a fortnight before she came under my care. Pulse soft; tongue clean; catamenia irregular, generally very scanty, but, at the time she applied to the dispensary, very profuse; bowels costive. I was at first inclined to suspect uterine disease; but, on a careful examination with the speculum, I could detect no evidence of it. She was ordered to take, every four hours, the following pill: ℞ Plumbi acetatis gr. iij; morphiæ acetatis gr. ¼. M. Two tablespoonfuls of the following mixture were also ordered, every four hours. ℞ Acidi sulphurici diluti ʒij; magnesiæ sulphatis ℥j; misturæ camphoræ ʒvijss. M.

Oct. 20. Much the same. Hæmorrhage from the uterus very profuse; the vomiting of blood appeared to have ceased: the bowels were freely opened; she complained of uneasy sensation round the navel, increased on pressure. To continue the medicine; and to have eight leeches applied to the abdomen, and a blister to the same region at bed-time.

Oct. 21. Not nearly so well; tongue very much furred; gums appeared sore; breath offensive; pulse sharp and vibratory; pain in the head and bowels much increased; had vomited a considerable quantity of blood; slight strangury. To discontinue the lead. ℞ Olei Terebinthinæ ʒiss; pulveris tragacanthæ comp. ʒij; extracti conii ℈ss; tincturæ digitalis ʒj; misturæ camphoræ ʒviiss. M. Three tablespoonfuls every four hours. Warm turpentine to be applied to the loins. ℞ Pulveris ipecacuanhæ compos. gr. x; hydrargyri chloridi gr. ij; fiant pilulæ iij. To be taken at bed time.

Oct. 22. Passed a better night; pain in the head much relieved; the catamenia have ceased; she threw up a small quantity of blood after breakfast; bowels inactive; micturition still scanty, but not painful; had perspired freely during the night. ℞ Olei ricini ʒvj; olei Terebinthinæ ʒss. M. To be taken directly. To continue the last mixture.

Oct. 23. Still improving; no return of the bleeding, complains of great weakness; is very much blanched from the loss of blood. ℞ Potassii iodidi gr. i; pulveris opii gr. ss; extracti lactucæ gr. ij; fiat pilula. To be taken at bed time.

Oct. 24. Much better. To continue the pill. ℞ Olei Terebinthinæ ℥j; tincturæ gentianæ comp. ʒss; sodæ sesquicarbon. ℈iij; pulveris rhei ʒss; decocti aloes comp. ad ℥xx. M. Two tablespoonfuls twice a day. From this date she continued to mend; and was discharged cured, Dec. 7, 1842.

Case IV. M. H., aged 60, residing at Holbeck, was received into the Leeds Public Dispensary, December 14, 1842. She had been ailing for a long time, and latterly had become jaundiced; she had been much

troubled with pyrosis for some weeks, and informed me, that she had noticed the abdomen to be considerably swelled, before she went to bed. On the day of her admission, she was seized with sickness, and vomited about a pint of blood; this, she stated, gave her great relief. There was considerable tenderness over the stomach; the liver was painful to the touch, hard, and apparently very much enlarged. The bowels were lax, and had been so for some time. The urine was dark; she had a bitterish taste in her mouth; the tongue was coated with a yellowish white fur; the conjunctivæ were yellow; the pulse small, irritable, and quick; the skin dry. She was ordered to have eight leeches applied to the right side, and to take the following pills immediately. ℞ Pilulæ hydrargyri gr. iij; calomelanos gr. i; pulveris ipecac. compositi gr. viij. M. Fiant pilulæ ij. ℞ Spiritûs Terebinthinæ ʒi; infusi juniperi comp. ʒviiss; sodæ sesquicarbonatis ʒi. M. Two tablespoonfuls every four hours.

Oct. 15. She had headache, occasioned by the opium; had parted with more blood during the night; bowels not relieved since yesterday. ℞ Olei ricini ʒiv; tincturæ rhei compositæ ʒij; olei Terebinthinæ m. xx. M. To be taken directly. ℞ Unguenti hydrargyri fortioris ʒij; camphoræ ℈ij. A small portion to be rubbed over the region of the liver every night.

Oct. 16. Very much jaundiced; feels better; bleeding checked. To continue the mixture. ℞ Pilulæ hydrargyri gr. v; extracti colocynthidis compositi gr. iv. Fiant pilulæ ij. To be taken every night.

Oct. 20. Mouth tender; has had no return of the hæmorrhage; symptoms improving; still troubled with waterbrash. ℞ Extracti taraxaci ʒj; pulveris rhei ʒj; olei Terebinthinæ ʒj; potassæ tartratis ʒi; aquæ ad ʒviij. M. Two tablespoonfuls every six hours. R. Bismuthi trisnitratis gr. iij.; extracti taraxaci gr. ij. M. To be taken twice daily. This patient was discharged cured, January 4, 1843.

Epistaxis. Since I have prescribed Turpentine in this affection, I have rarely seen the bleeding continue more than two or three days. In these cases, I mostly combine the Turpentine with muriated tincture of iron.

Case v. A lady, considerably advanced in years, and who had from infancy been subject to hæmorrhage from the nostrils, consulted me about two years ago, when labouring under one of her periodical attacks. She informed me, that she had rarely of late had the bleeding arrested without plugging, and even then the hæmorrhage was liable to recur on the most trifling excitement, or extra exertion At her request, I plugged the nostril; and gave her the infusion of matico, with pills of acetate of lead. The complaint proved troublesome, and it was three weeks before the hæmorrhage had completely ceased. This, she told me, was about the length of time that these attacks generally lasted; they always left her very much enfeebled. About fourteen months after this, I was suddenly summoned in the middle of the night to the same lady, who had a recurrence of her complaint. After plugging the nostril, I gave her a drachm of the oil of Turpentine, with ten minims of the muriated tincture of iron, in a little water, and ordered half the quantity of the same medicine every two hours, if the bleeding continued. At my morning visit, I found that the hæmorrhage had been successfully arrested. In

three days the plug was removed; and, up to the present time, she has had no return of the bleeding.

My confidence in this remedy, for arresting atonic epistaxis, is unbounded. I have frequently trusted to it alone, without resorting either to plugging, or to the employment of any other astringent.

Case vi. A poor man (a bookbinder, residing in Union Street,) called at my house, a short time age, bleeding profusely from the nose; a drachm of oil of Turpentine was immediately given to him in water; as he had a little distance to go, and it being a very cold night, I plugged the nostril. In removing the plug on retiring to bed, he brought on a return of the bleeding. Another drachm of Turpentine was administered. In three days he was perfectly well.

Hæmaturia. The propriety of prescribing oil of Turpentine in Hæmaturia has been doubted by many. It has been reported to have produced the very disease which it was intended to alleviate. I have never seen any ill effects from its use in this disorder: but, on the contrary, I regard the judicious administration of Turpentine calculated to arrest its course. There may be cases of organic change in the structure of some parts of the urinary organs, which might render its employment objectionable; but, hitherto, I have not met with any such.

Case vii. W. W., aged 19, of spare habit, slight stature, pale and sallow complexion; works in a flax mill. His symptoms had lasted three days prior to his appearance at the Leeds Dispensary, June 4, 1842. They were dull, deep-seated, aching pain in the lumbar region, tenesmus with frequent bloody micturition, anorexia and fever. He had been subject to these attacks for the last two years, and latterly they had recurred at shorter intervals. ℞ Pulveris uvæ ursi gr. x. To be taken three times a day. ℞ Pulveris jalapæ comp. gr. xv; calomelanos gr. ij. To be taken at bed time.

June 6. Hæmorrhage still continues. ℞ Pulveris uvæ ursi ʒj; olei menthæ piperitæ m. ij; olei Terebinthinæ ʒij; pulveris tragacanthæ comp. ʒj; aquæ ad ʒviij. M. Two tablespoonfuls every four hours. ℞ Antimonii potassio-tartratis ʒj; olei tiglii ʒj; liquoris ammoniæ fortioris ʒiv; spiritûs Terebinthinæ ʒi M. Liniment to be rubbed into the loins at bed time every night.

June 8. Much improved; liniment has produced a copious crop of pustules; urine clear; no blood.

June 15. Discharged cured. Two years after, this patient informed me, that he had not had any relapse.

Case viii. A. W., aged 68, a dispensary patient, admitted August 10, 1842. She had been ill about a week, and had had considerable pain in the left side and shoulder, also diarrhœa, and blood in the urine. ℞ Misturæ cretæ comp. ʒvij; confectionis aromaticæ ʒj; pulveris uvæ ursi ʒiss.; tinct. opii ʒss. M. Two table-spoonfuls every four hours.

Aug. 14. Bowels more comfortable; still parts with blood in the urine. To repeat mixture, with a drachm of oil of Turpentine.

Sept. 6. Had a slight relapse attended with nausea. ℞ Acidi nitrici dil. ʒij; olei Terebinthinæ ʒi; acidi hydrocyanici dil. (P.L. 1836) ʒss; aquæ ad ʒviii. M. Two tablespoonfuls twice or thrice daily. This patient was discharged cured, on the 19th. She died about a year after, under the care of one of my colleagues, of another affection. An autopsy was not allowed.

Case ix. M. S., aged 26, married, a collier, was admitted January 12, 1843, as an out-patient to the Leeds Dispensary. He had been ill for several days, with fever, attended with great thirst, headache, foul tongue, and severe lancinating pain in the lumbar region, extending to the left knee. Urine in small quantity, bloody. Bowels constipated. He was sounded for stone, but nothing was detected. He attributed his ailment to cold. ℞ Pilulæ hydrarg. gr. iij; calomelanos gr. i; pilulæ aloes cum myrrhâ gr. vj. M. ut fiant pil. ij. To be taken at bed time. Ung. antimonii potassio-tart. ʒi, to be rubbed into the loins every night. ℞ Magnesiæ sulphatis ʒi; olei Terebinthinæ ʒi; pulveris uvæ ursi ʒi; misturæ camphoræ ʒviij. Two tablespoonfuls every four hours. This patient was discharged cured, January 20.

Capillary Hæmorrhage. I have not witnessed many instances of this disorder, but the following case may, I think, be fairly considered as an example.

Case x. J. C., residing at Burmandtofts, Leeds, consulted me on the 19th of October, 1842. He was of a spare make, aged thirty-two, and followed the occupation of a town missionary. He was frequently attacked with ephemeral fever, arising, no doubt, from the daily exposure to miasmatic influence, whilst administering religious consolation to the indigent sick. It was immediately subsequent to one of these attacks, that he was seized with jaundice, attended with an exacerbation of all the febrile symptoms. The alvine evacuations were clay-coloured and scanty, the urine in small quantity, and of a deep red tinge, and the skin moist. As this patient was peculiarly sensitive to the influence of mercury, I was cautious in prescribing it. He was ordered to take the following pills at bed time:—℞ Pilulæ hydrargyri gr. iij; pulveris ipecac. gr. ss. M. The following mixture was also prescribed. ℞ Infusi sennæ ʒviij; antimonii potassio-tartratis gr. i; magnesiæ sulphatis ʒi. M. Two table-spoonfuls every six hours.

Oct. 21. On this day I was urgently sent for to Mr. C., who was reported to have burst a blood-vessel. Not being able to leave a female patient, whom I was then visiting, I requested the messenger to call in some other medical man. At eleven o'clock the same evening, the messenger informed me that they had called in the nearest neighbouring practitioner, but the hæmorrhage still continued. When I arrived, I found that the doses of blue pill, which Mr. C. had taken the two previous nights, had brought on ptyalism. The saliva was mingled with blood, which oozed from the upper surface of the tongue. On examining the mouth, I found the tongue enormously swollen and distended. The patient seemed much exhausted and frightened, for the bloody saliva, every now and then, gushed from his mouth in large quantities. He had taken acetate of lead and nitric acid. I immediately gave him a drachm of the oil of Turpentine in water, and applied creasote all over the upper surface of the tongue. In an hour, the hæmorrhagic secretion appeared less profuse; another dose of the Turpentine was administered. At two o'clock in the morning I left him, the bleeding having ceased. I ordered the Turpentine to be given in half-drachm doses every hour.

Oct. 22. The patient was considerably better at my morning visit; there had been no return of the hæmorrhage, and the salivation was

materially lessened. The jaundice, however, still continued. ℞ Olei Terebinthinæ purif. ʒj; extracti taraxaci ʒss; sodæ sulphatis ʒj; aquæ ad ʒvj. M. Two tablespoonfuls twice daily. In a short time Mr. C. was convalescent. I advised him, however, to continue the Turpentine, in combination with muriated tincture of iron and infusion of quassia. He subsequently enjoyed much better health than he had for years previously.

During my house-surgeoncy at the Charing Cross Hospital, in 1836 and 1837, a little boy was admitted, under the care of the late Mr. Howship, suffering from necrosis of the tibia. This child belonged to a family in which the hæmorrhagic diathesis was strongly developed. One, if not two (I quote from memory), of the child's relatives had died from sanguineous exudation after slight injuries. It was decided, on a careful consideration of the case, to remove the dead portion of bone, to effect which, it was necessary to make an incision of about an inch long, through the integuments covering the tibia. The operation, which was skilfully performed by Mr. Howship, did not occupy many minutes. The boy was removed to his bed in high spirits, but, in a few hours, a remarkable change occurred; the bleeding from the cutaneous vessels continued, notwithstanding the application of powerful styptics, and the child, who had now become pale and blanched, from loss of blood, sank in a few hours after the operation. I have often deeply regretted that Turpentine was not administered in this instance. I have alluded to it, in order, that should a similar one occur, this remedy may not be lost sight of.

Purpura Hæmorrhagica. Until the year 1846, I had very few opportunities of testing the therapeutic properties of Turpentine in this affection; but in the severe epidemic of this disorder, which took place among the poor, from the deficiency of the potatoe crop, and scarcity of vegetable food, in the winters of 1846 and 1847, I generally found Turpentine, in combination with bark and full purgative doses of Cheltenham saline waters, a very effectual remedy.

Case xi. R. H., aged forty-seven, a cook, unmarried, who for twelve months had been out of a situation, applied to me for advice, Sept. 22, 1847. The following were her symptoms:—Bilious retching; pain in the left side; pain darting from the left kidney to the brim of the pelvis; great dyspnœa, pulse 96, small and weak; respiration 26, rapid and short; bowels constipated; catamenia ceased three years; complexion pale and sallow; tongue furred and indented; breath fœtid; gums spongy: urine high coloured, loaded with lithates; purplish petichiæ, most extensive on the left side of the body; ankles swollen; often much annoyed with flatulency. This woman had eaten sparingly of vegetables the previous winter; her diet had chiefly consisted of boiled rice, a diminished quantity of bacon, salted fish, fresh meat, bread, and tea. ℞ Pilulæ hydrar. gr. iij; extracti colocynthidis compositi gr. vj. Fiant pilulæ ij. To be taken at bed time. ℞ Acidi nitrici diluti ʒi; tincturæ cinchonæ ʒiv; infusi cinchonæ ad ʒviij. M. Two tablespoonfuls morning and evening. To eat freely of cooked vegetables, and have cider or perry for dinner.

Sept. 26. Much about the same—nights disturbed. To take two tablespoonfuls of the following mixture twice daily:—℞ Acidi nitrici

diluti ʒi; tincturæ cinchonæ ʒiv; olei Terebinthinæ, tincturæ hyoscyami aa. ʒii; infusi cinchonæ ad ʒviij. M. The pills to be omitted.

Oct. 2. Eruption declining—bowels costive. To have a nitro-hydrochloric acid bath. ℞ Pilulæ hydrargyri ℈i; extracti colocynth. compos. ʒi; pilulæ galbani comp. ℈ij. M. et divide in pilulas xxx. Two to be taken twice a week. To take ʒxviij of the sulphuretted saline water every morning.

Oct. 10. Decidedly improved. To repeat the warm bath; to continue the saline aperient, adding to each morning dose a teaspoonful of the following drops. R. Tincturæ cinchonæ ʒi; olei Terebinthinæ ʒss. M. This woman was perfectly well by the end of the month.

Hæmoptysis. This affection is generally associated with pulmonary phthisis, so that I shall treat of it in connexion with that disorder. As the use of Turpentine is not new in the treatment of pulmonary consumption, I shall condense my remarks as much as possible. I am not aware that the inhalation of the vapour has ever been recommended in pectoral disorders. I have not only found it useful in allaying the cough in acute and chronic bronchitis, but I have also seen a very great amendment follow its use in tubercular phthisis. The success which attended the inhalation of tar vapour, first recommended by Bishop Berkely, and so highly extolled by Sir A. Crichton, was, no doubt, owing to its volatile principles, analogous, in some respects, to those of Turpentine, from which it differs in containing a larger amount of carbon and empyreumatic oil, and less of the essential oil. "Out of fifty-four cases treated by Drs. Hufeland and Neumann, at the Hospital of La Charité, Berlin, four were cured; six were greatly improved; sixteen were unaffected by it; twelve became worse; and sixteen died." I have frequently resorted to the use of medicated vapours, containing Turpentine, conium, opium, and hydrocyanic acid, in every stage of this disorder. In the active form of pulmonary hæmorrhage, as well as in the distressing paroxysms of the morning cough, I have seen them produce a very tranquillizing effect. From the inquiries which I have made at the different Camphine and Turpentine manufactories, I have learnt, that the individuals engaged in the distillation of these ingredients are rarely on the sick list. Turpentine is considered by the men generally, to possess very healing properties. Applied to the lungs, in the form of vapour, or taken internally, I conceive that it exerts a benign influence in an ulcerated condition of these organs; and by inducing a healthy condition of the ulcerated surfaces, tends to produce cicatrization, after the morbid contents have been evacuated from the vomicæ, and the system improved by tonic or other remedies. It is known to exercise a salutary influence in chronic ulcers, indolent sores, and recent abrasions: *cæteris paribus*, it will have the same effect on internal ulcerations when cautiously inhaled or judiciously prescribed. In the following observations, in lieu of enumerating a variety of physical phenomena as elucidatory of incipient or confirmed phthisis, I shall confine myself to what is usually considered as the most unequivocal symptom of this disorder. The physical phenomena deduced by exploration of the pulmonary parietes, do not always furnish criteria on which we can depend with unbiassed confidence; but there is no sign

so strongly confirmatory of serious thoracic mischief, as pulmonary hæmorrhage; and whether it be occasioned by a plethoric condition of the heart or great vessels, or a congestive state of any of the cerebral or abdominal viscera, or by disease inherent in the texture of the lungs, the sequence too often proves its connexion with pulmonary consumption. I do not profess to have cured phthisis in any of the instances which I am about to narrate. All that I wish to imply is, that Turpentine has been more successful in restraining the hæmorrhagic tendency, and preserving the patients in a condition of apparent health, and for a much longer period, than any other remedy of which I have made trial. I have purposely abstained from the narration of any case of very recent date, knowing, that in a disorder of so deceptive a nature as phthisis, we ought to be especially guarded as to our prognosis, and not be too rash in forming our judgment of the future.

Case xii. Mr. W., aged 36, cabinet-maker, consulted me on the 14th of May, 1839, for a pain in his chest, attended with considerable dyspnœa. The physical signs denoted incipient phthisis; and this diagnosis was confirmed a few weeks after, by the occurrence of hæmoptysis. Leeching, blistering, and counter-irritants were ordered, and a mixture containing Turpentine and infusion of roses. He improved under this treatment; and after a residence of some months in the Isle of Man, he returned home, and pursued his usual avocation. Four years afterwards, he was attacked with inflammation of the bowels, from exposure to cold and damp, which proved fatal. On examination of the body, the right lung contained a small cavity, which had a very healthy appearance; it contained a little yellowish matter; its lower edges were crossed and united by bands easily rent asunder. There was a considerable amount of miliary deposit in the apex of the same lung, but none in the other.

Case xiii. A. S., aged 30, married, without family, a gardener, was admitted to the Leeds Dispensary, July 6, 1842, suffering from profuse hæmorrhage of the lungs. There was considerable dulness in the upper portion of both lungs; gurgling rhonchi. This case proved intractable for some time, but the hæmoptysis was finally subdued, and the man resumed his usual employment, continuing, by my advice, to take daily a few drops of Turpentine with infusion of quassia. When last I heard of him, he seemed to be in tolerable health.

Case xiv. A married lady consulted me in 1841, for supposed tubercular disease. On examining the chest, there was slight depression to the extent of about a quarter of an inch in the right infra-clavicular region. The nipple on the breast of the same side, was the eighth of an inch nearer the sternum than the one on the left. The respiration was masked, and percussion elicited a damp sound. The left side was clear on percussion, and respiration was puerile. The appetite was extremely capricious, the bowels irregular, catamenia regular, nights restless, urine turbid, yellow with deposit; there was constant teasing cough, with slight hæmoptysis. She had also a gnawing sensation in the pit of the stomach, with a tendency to retching. To have six leeches applied to the chest. ℞ Olei jecoris aselli ʒiss; liquoris ammoniæ fortis ʒss; linim. saponis compos. ad ʒiij. M. To be rubbed on the chest night and morning. To take two tablespoonfuls of the following mixture three times a day. ℞ Infusi rosæ compos. ʒvj; magnesiæ sulphatis ʒvj; olei Terebin-

thinæ ʒij. M. ℞ Extracti colocynth. comp. gr. vj ; morphiæ acet. gr. ss ; pilulæ hydrarg. gr. iij. Fiant pilulæ ij. To be taken at bed time.

The following day this patient passed several portions of tape-worm. She recovered, and by perseverance in the following mixtures for some time, together with a temporary residence at the sea side, she ultimately regained her former health, and the last account I had was highly favourable ; she has had no appearance of tape-worm since. ℞ Mist. ferri comp. ʒvijss ; olei Terebinthinæ ʒij ; tincturæ camphoræ comp. ʒij. M. Two tablespoonfuls twice a day.

Case xv. A. O , washerwoman, complained of severe cough, with mucous expectoration, which, a few days previously, had been mixed with blood ; there was great pain in the left side, with inability to lie on it ; pulse 100, sharp and thrilling ; respiration 28, short ; bowels regular ; catamenia regular ; urine scanty, high coloured ; tongue pale and dry ; there was feverishness and restlessness. Both infra-clavicular regions were slightly depressed ; in the upper third of the left lung the expiratory murmur was harsh and prolonged, with small crepitating râle ; there was also slight dulness on percussion, anteriorly and posteriorly. On the right side, there was increased expiratory murmur, and clear percussion-sound. There was also bronchophony. The action of the heart was more distinct than natural under the right clavicle ; posteriorly it was diffused. She was ordered to take the following pills at bed-time. R. Calomelanos gr. iij ; extr. colocynth. comp. gr.vj. M. R. Potassæ nitrat. ʒss. ; tincturæ digitalis ʒi ; syrupi scillæ ʒiv ; aquæ ad ʒviij. M. A fourth part every four hours.

Nov. 19, 1843. Had rather a sharp attack of dyspnœa, with return of pulmonary hæmorrhage. A blister was ordered to be applied to the chest, and two table-spoonfuls of the following mixture to be taken every four hours : R. Olei Terebinthinæ ʒij ; tincturæ digitalis ʒi ; decocti aloes comp. ʒviij. M. Under this treatment, this patient continued to improve. She took occasionally linseed oil, cod-liver oil, and sarsaparilla, with Turpentine and lime-water ; and in the following summer had become convalescent.

Case xvi. Mrs. W., a married lady, aged 26, without children, had for several years been in a declining state of health. I first saw her in 1848 ; she was extremely pale and emaciated, and had for some time previous parted with small quantities of florid blood. These attacks of hæmorrhage mostly occurred in the morning. Her nights were very much disturbed ; she had paroxysms of flushing, succeeded by profuse perspiration. Exploration of the thoracic viscera impressed me most unfavourably with this patient's condition. Nearly fifteen months she was confined to her room, and used Turpentine inhalations, infusions of matico with Turpentine, infusions of the water hemlock, occasionally replaced by cod-liver oil and emulsions of almond oil and hydrocyanic acid. Her chest was assiduously bathed with spirits of Turpentine, and, in addition, she had two galvanic issues established under each clavicle. In the autumn of 1848, while improving in health, she had an attack of scarlet fever, which confined her for some months longer to her room. In the following summer, she rallied sufficiently to take a trip to the sea-side, and after a residence there of some time, she was enabled once more to join the ordinary duties of the domestic circle.

Case xvii. A. B., aged 21, a spinner in a flax-mill, was admitted under my care, into the Leeds Dispensary. The catamenia were suppressed, the skin moist, the bowels relaxed: pulse 100, sharp, small; respiration 30, irregular; severe pain in the right side; constant cough; puriform expectoration; profuse hæmoptysis; papular eruption on the right leg, with œdema of the ankles. She was cupped and blistered; and, after the first febrile symptoms had subsided, she took ferruginous preparations, with decoction of aloes, and Turpentine. In a few months, this patient recovered sufficiently to return to her work.

Case xviii. M. C., aged 22, had the following symptoms: constant teasing cough; greenish expectoration; severe pain in the heart and chest; bowels loose; tongue clean; night-sweats, and hectic fever.

May 3, 1843. She was ordered to take naphtha, with ling-liver oil, and to have a blister applied to the chest.

May 10. Much worse; great dulness on the right side, with absence of respiratory murmur; crumpling sound in the right infrascapular region; left side normal, with increased respiratory murmur. She had hæmoptysis, and the bowels were still loose. R. Pil. saponis cum opio gr. iv; to be taken at bed-time. R. Olei olivæ ʒi; spiritûs Terebinthinæ ʒi; tincturæ digitalis ʒi; liquoris potassæ ʒi; liquoris opii sedativi ʒss; aquæ ad ʒviij. M. Two table-spoonfuls every two hours. She improved under this treatment; and the following medicine was ordered. R. Quinæ disulphatis gr. vj; acidi sulphurici diluti ʒss; olei Terebinthinæ ʒi; tincturæ camphoræ comp. ʒij; infusi quassiæ ad ʒviij. M. Two tablespoonfuls three times a day. In a few months, convalescence was established.

Case xix. S. R., aged 19, dressmaker, was admitted, under my care, into the Cheltenham General Hospital and Dispensary, in October 1846. She had been, for some time, frequently seized with chills, alternately with flushing; great pain and tenderness on the left side; cough with mucous expectoration, accompanied sometimes with a small quantity of blood of a bright florid colour; small weak pulse, 92; respiration laboured, 28; obstinate constipation; urine scanty, opalescent, specific gravity 1026. She was treated with liniments of pyroligneous acid and oil of Turpentine; blisters; cathartics; and Terebinthinous medicines. The bleeding was arrested, and convalescence established. She took a course of the Pitville saline, with Turpentine, with great advantage, and has hitherto had no relapse.

Case xx. A youth, aged 18, apprentice to a grocer, was seized with hæmoptysis on the 6th March, 1842. He had previously been, for some time, under my care, and had manifested indications of incipient phthisis. After subduing the more prominent affection, the pulmonary hæmorrhage, by means of Turpentine mixtures, counter-irritation, and local bleeding, I advised an early removal to the Isle of Man. The youth inhaled freely the Turpentine vapour, and I daily tested the vital capacity of the chest by means of the pulmometer. This, I think, tended considerably to his recovery. The habit of cautious prolonged inspiration often acts beneficially on the system of phthisical patients; emphysema may also occasionally be induced, and when this has resulted, tubercular phthisis has been known to be arrested. Two years after, when I examined this youth's chest, I could detect a marked difference in the

respiratory movements of the right and left side. He could, however, with ease displace ʒc of water in the pneumatic trough. When first I saw him it required a very forcible expiration to effect the dislodgement of ʒlxx. When I recently heard of him, he was alive, and enjoying a tolerable share of health.

It is extremely difficult to lay down any plan for guidance in the treatment of phthisis. I have tried several remedies with apparent benefit. But though I have related the above cases, which vary in their dates from ten to two years ago, I should hesitate ere I asserted that I had cured one case of pulmonary consumption. Nevertheless, I believe the disease capable of being favourably influenced by treatment, and even of being often brought to a successful termination, as I have no doubt some of the cases I have related will hereafter testify.

Parasitic Worms. I know of no remedy comparable to the oil of Turpentine for the expulsion of parasitical animals. To accomplish this object, I place little reliance on the purgative action induced by the medicine, but I depend chiefly on the dissemination of the Terebinthinous principles throughout the animal tissues. The only way effectually to destroy these animals, is to render the aliment on which they subsist unfit for them. In fevers of a low or putrid character, in scarlatina and some of the exanthemata, worms are frequently expelled, *per vias naturales*, prior to death, by the noxious emanations which often exist in these affections, and which are destructive to parasitical life. It ought to be our aim to imitate nature; and where it can safely be done, to taint the food on which the different species of the entozoa feed, with such noxious ingredients as are known to be inimical to them. Thus Dippel's animal oil, Chabert's oil, and similar nostrums, are valuable only so far as they carry out this important object. Turpentine will effect the entire destruction of any of the entozoa and their ova, provided it be given in small doses, and continued for a sufficient length of time to saturate the system with its odour. Purgative doses of Turpentine, or enemata containing the same, decoctions of the bark of the root of the pomegranate, and many of our most esteemed vermifuges, will often suffice for the removal or destruction of lumbrici or ascarides. In tapeworm, in many instances, a different treatment is required. We may frequently succeed with the above remedies, but we occasionally fail. This is owing to the habits of the animal. It forms a nidus of gelatinous matter, into which it protrudes its head and neck after it has separated itself from the remaining joints of the body, and then, on the first intimation of danger, attaches itself to the intestine by means of its four suckers so firmly, as to defy any reasonable force to detach it. The tail of the animal is occasionally met with high up in the bowels, and even in the stomach, whilst the head occupies a position in the intestinal tract considerably lower. This may be a provision of nature to warn it of the presence of any noxious or irritating ingredient in the stomach, and thus to enable the animal to preserve its vitality. From the fluted manner in which it sometimes lays along the intestine, it must be extremely difficult to effect its expulsion, except by medicines which exert a poisonous action on it through its food. Vermifuges, when taken by the mouth, have frequently occasioned yards to be brought away by vomiting; but the animal remains secure in his retreat. If, however,

we give small doses of Turpentine, or any empyreumatic oil, the secretions will at length become so tainted, that we cause its death and subsequent expulsion or absorption: and though we may never see it expelled, we may be pretty confident that we have occasioned its death, by the subsidence of all those symptoms and distressing sensations, which it produces whilst alive.

Case xxi. A female, who for upwards of twenty years had repeatedly expelled considerable portions of tape-worm, applied to me, in 1843. She had taken Turpentine in full doses, and had generally been much relieved by it; but the parasite still remained. I ordered half an ounce of oil of Turpentine, half an ounce of castor oil, and an ounce of the decoction of the bark of the root of the pomegranate, to be taken every morning. She parted with several yards of worm; but as I could not detect the head amongst any portion, I advised her to take two tablespoonfuls of the following mixture daily, for three months. R. Infusi quassiæ ʒviij; olei Terebinthinæ ʒij; tincturæ ferri sesquichloridi ʒi. M. She attended to my advice; and, two years after, she told me that she had had no return of any of her uneasy sensations.

Case xxii. A cook, in my employ, had for years been the subject of tape-worm, and had taken Turpentine repeatedly, without deriving any other than temporary benefit from it. I put her on a plan similar to the former; and in a few months she found her health perfectly re-established, and has hitherto had no return of the affection.

I have seen two instances in which grubs have occasioned much annoyance and distress, by depositing their ova in the urethra.

Case xxiii. A young gentleman, about 22 years of age, had intolerable itching at the end of the urethra, which generally occurred every four or five weeks, lasted for three days, and subsided as soon as the larvæ (small white-bodied animalcules with black heads,) appeared. I advised him to inject a few drops of Turpentine in mucilage, two or three times a day, into the urethra; and to take ten drops of the same in infusion of quassia twice daily. This plan succeeded, and he recovered.

Chronic Rheumatism. In this affection I have frequently found that the Oil of Turpentine, combined with bark or guaicum, has given considerable relief.[1]

Flatulent Distension of the Abdomen. This is a distressing symptom, which often accompanies a dyspeptic state of the system, especially in gouty patients. It is sometimes attended with nervous excitement of the heart, sometimes accompanied by spasm of the bowels, and dyspnœa. For the relief of this symptom, whether originating from mal-assimilation of the food, or supervening on obstruction of the bowels, or occurring after an operation for strangulated hernia, I have found no medicine so efficacious in quickly dispelling the flatus, as Oil of Turpentine. In gouty subjects who freely secrete lithic acid, and who are much troubled with this kind of flatulency, I have rarely ever experienced that small doses of the oil of Turpentine, with or without

[1] I have also seen the alkaline camphine bath of very great service, in some long standing cases of this disorder. I have tried it in lumbago, sciatica, and gout, and can speak highly favourably of it in these affections. Many of the parties who have tried it, have derived so much benefit from it, in the alleviation of their aches and pains, that I have known them to resort to it oftener than I had advised.

colchicum, have failed to afford very great relief, more particularly when accompanied by a mild diuretic course of our Cheltenham salines. It is of the greatest importance to avoid active purgation in this state of the system.

The following is a very interesting case of the removal of a large biliary calculus, which for several days assumed a very serious aspect, threatening the life of my patient.

Case xxiv. An elderly lady was seized with sudden sickness and pain in the præcordial region, followed by obstruction of the bowels. Large doses of calomel, croton oil, and other drastic purgatives, were given to relieve the latter; creasote and hydrocyanic acid, for the former. Local bleeding was employed, and stimulating applications and bladders containing ice, were applied in turns to the abdomen. Enemata of Turpentine and rue were also administered, without producing any favourable change. On the contrary, the sickness became so distressing, that on the sixth day of the attack, it was decided in consultation, to abandon all remedies by the mouth, and trust entirely to Turpentine clysters and the local application of ice and of epithems containing cajeput oil, Turpentine, opium, croton oil, liquor ammoniæ, etc. On the seventh day, the abdomen became enormously distended with flatus, a considerable quantity of which was withdrawn from the bowels several times in the day, by means of the tube of a stomach-pump introduced into the rectum. After the gas was pumped out, upwards of a gallon of iced water was thrown into the bowels; and as soon as this was evacuated, about a quart of warm water, containing Turpentine, was immediately injected. This plan was persevered in until the eleventh day; and notwithstanding the supervention of hiccup, and several other unfavourable indications, the patient at last obtained relief. A hard substance seemed suddenly to be disengaged from a portion of the small intestines. Shortly after one of these operations, a regular action of the bowels ensued; and on the fourteenth day she passed a biliary calculus, of the size of a walnut, and weighing ʒii, gr. xi. Its upper surface was perfectly smooth and concave, and appeared to have been attached to a smooth substance, such as the lining membrane of the gall-bladder. For twenty years, this lady had complained of pain in the pit of the stomach after eating, and had never had an action of the bowels without strong drastic purgatives. A tea-spoonful of castor oil, with ten drops of Turpentine, were ordered to be taken every morning; and in a few days she became perfectly convalescent, and has continued well from that day.

Puerperal Convulsions and Peritonitis. Those who see an analogy between puerperal convulsions and peritonitis, will be inclined to regard Turpentine as likely to prove extremely valuable in the former disorder. Repeatedly have I treated puerperal convulsions, and puerperal peritonitis, as well as peritonitis independent of the parturient state, with this medicine, and have attributed the rapid subsidence of the more prominent symptoms to its influence.

Case xxv. A. C., aged seventeen years and a half, residing at New Town, Leeds, was seized with convulsions of a most formidable character, a few hours after she had given birth to a male child. The gentleman who attended her in the confinement, requested my advice in the case.

Detrahatur sanguis è brachio ad ʒxx. Calomelanos gr. vj. To be taken directly. R. Ol. Terebinthinæ ʒiv; magn. sulphat. ʒi; aquæ ad ʒviij. Two tablespoonfuls every two hours. Enema of Turpentine and gruel. In six hours, this patient recovered consciousness, and, from that period, progressed favourably.

Case xxvi. M. C., aged twenty-nine, was seized, on the 5th of Feb. 1843, with intense pain in the head; great prostration of the vital powers; small, weak, fluttering pulse; abdominal tenderness; retraction of the lower extremities; constipation, and pyrexia. She had been confined two days previously of a male child. Bladders of ice to be applied to the shaven head; warm Turpentine to the bowels; Turpentine enema. V. S. ad deliquium animi. Twenty-four ounces of blood were lost, before fainting ensued. R. Calomelanos gr. iij; pulv. opii gr. ss. Fiat pilula. To be taken every three hours. R. Olei Terebinthinæ ʒss; mist. sennæ comp. ʒviiss. M. Two tablespoonfuls an hour after each dose of the pills. This patient's mouth soon became affected, and she speedily recovered.

Case xxvii. A female servant, residing with a patient of mine, was taken ill a short time ago, with symptoms of diffused peritonitis. The bowels were extremely obstinate, and the retching incessant. She was largely bled, both locally and generally; mixtures containing Turpentine, and pills of calomel and colocynth, were freely administered; clysters and Turpentine epithems were also resorted to. Towards the termination of the fourth day, the bowels regained their propulsive power. Large quantities of fæcal matter were evacuated; and by persistence in small doses of castor oil and Turpentine, with vegetable tonics, she soon recovered her former health.

Diseases of the Eye. The testimony of several celebrated oculists has been adduced in favour of this drug in the treatment of many inflammatory affections of the eye. I am not able to say anything, either for or against its use. As yet, I have never made trial of it in disorders of that organ.

Diseases of the Nervous System. Turpentine has been considered to be of eminent service in apoplexy, hydrocephalus, and epilepsy. One case of *hydrocephalus*, a little boy, seven years of age, seemed to be very much benefited after the administration of a few enemata containing this drug, and the child eventually recovered. In *apoplexy*, I have witnessed a like result; but I do not consider this, and similar instances, sufficiently decisive to warrant me in concluding that Turpentine exercised a controlling power over the disease, otherwise than by its purgative action. In *epilepsy*, depending upon intestinal irritation, such as worms, purgative doses of, or enema containing, Turpentine, will generally be found efficacious. Nevertheless, the majority of epileptic patients will not derive any very great advantage from it. In such examples, we must ascertain the cause of the malady, which may often be of a character over which medicine possesses but little anti-convulsive influence.

Injuries occurring from Burns or Scalds. I have often seen these much benefited by the Terebinthinous unguents, or liniments, which I have recommended to be applied.

Case xxviii. A young female was dreadfully scorched by the sudden ignition of some foul air, pent up in a water cistern. She had inad-

vertently placed a lighted candle on the edge of the cistern whilst she removed the lid—an instantaneous explosion followed this act. She was thrown down; and on examination, was found to be considerably burnt about the hands, face, neck, and right arm. The following liniment was applied to the denuded surfaces, and other appropriate treatment enjoined. R. Pulveris opii gr. viii; liquoris calcis ʒi; olei Terebinthinæ ʒiv; olei lini ʒss. M. ut fiat linimentum. She soon recovered from these injuries.

Pertussis. In the second and third stages of this affection, I have frequently found liniments of Turpentine, with opium, rubbed on the spine and chest, of considerable value in mitigating the severity of the paroxysms. The inhalation of the vapour has also appeared to me to exert a calmative influence on the convulsive character of the cough.

Case xxix. Master C., aged 4 years, a stout, healthy-looking child, was the subject of hooping-cough, in the spring of 1845. The paroxysms were extremely violent, of frequent recurrence; and, as he had already lost two brothers by the same affection, the case caused considerable anxiety. I requested that he might be confined in a room, the temperature of which should not be less than 65° Fahr., by night as well as by day. To attain tranquillity of mind (a necessary item in the treatment of this malady), I desired that all scenes of excitement should be avoided; for I have known this to prolong the disorder, and even to be the cause of a fatal termination. A bath at 100°, containing half an ounce of the carbonate of potash to six gallons of water, was used three times a week; and the back and chest were rubbed every night with the following liniment. R. Olei Terebinthinæ purif. ʒiv; liquoris opii sedativi ʒij; olei succini ʒiss; linimenti saponis comp. ad ʒiss. M. The bowels were relieved by gentle laxatives, and the child was allowed to drink, *ad libitum*, of the following potion. Bicarbonate of potash, two drachms; extract of liquorice, half an ounce; honey, two ounces; boiling water, one quart. The effect of this treatment was very apparent in the altered and less suffocative character of the cough, which, after the first fortnight, rarely occasioned much uneasiness, except after a very long sleep. Change of air, with decoction of bark and small doses of Turpentine, and the occasional exhibition of the compound kino powder at bed-time, completed the cure.

I have recently witnessed very great improvement follow the immersion of the lower part of the body, as far as the chest, in an alkaline camphine bath. The proportion of camphine ought not to exceed, (for children under six years of age), from two to three drachms with three or four ounces of soda. The vapour of the bath, diffused through the sleeping apartment, and inhaled into the lungs, has seemed to have a very beneficial and tranquillizing tendency in this disorder. There can be no doubt also, that the absorption of the alkali, by rendering the pituitous secretion from the pulmonary organs less adhesive and tenacious, has contributed in no small degree to the relief obtained.

I have now concluded my remarks upon the medicinal properties of this drug. In the evidence which I have adduced, I have endeavoured to guard myself from an over-weening confidence in its virtues. In the treatment of any case, however simple, much must be left to the

judgment of the practitioner under whose care it has come. Like many other medicines, Turpentine may fail in producing the effects desired, if all the circumstances which may modify its action be not duly taken into account: but, when judiciously administered, I believe it to be one of the most valuable remedial agents which we possess.

Cheltenham, March 1850.

ON THE CONNEXION OF UTERINE AND OVARIAN DISEASE.

By EDWARD JOHN TILT, M.D., Physician to the Farringdon General Dispensary, and to the Paddington Free Dispensary for the Diseases of Women and Children.

[*Read before the Westminster Medical Society, March* 9, 1850.]

Why should the prognosis of Uterine Disease be more difficult than that of other organs? Why should very slight Uterine lesions be sometimes accompanied by intense reaction? Why should it ever happen that patients, when cured of these lesions, still continue to suffer as much as they did before treatment? It seems to me, that speculists have chiefly to guard against the too narrow circumscription of their field of investigation; for by this means they likewise circumscribe their comprehension of the disease, which they ought to study in all its numerous bearings. The French pathologists are not free from this reproach; and in proof of this assertion, the very interesting discussion on Uterine Disease, now proceeding in the French Academy of Medicine, may be referred to; a discussion in which many of those who have taken part will, in future, be considered illustrious among the founders of uterine pathology. Most of those who have spoken in that discussion, seem to look upon the Womb as an unconnected organ, to which alone is confided the whole task of generation; and, losing sight of its intimate relation with the other organs which form the reproductive system, they are often at a loss to explain the phenomena of its diseases, and are, therefore, in their opinions, completely at variance with each other. In the hope of suggesting an answer to the questions proposed, I offer the following remarks on the connexion between Uterine and Ovarian Inflammation.

The Ovaries are connected with the Uterus anatomically, physiologically, and pathologically. Without alluding to many amongst the inferior animals, wherein the Womb and Ovaria are always anatomically connected, and merely mentioning, that, according to Müller and Rosenhaller, they are likewise anatomically connected in woman during the first months of fœtal life, I shall remark, that whenever the system of reproduction is called into full activity, the fimbriated extremities of the Fallopian tubes clasp the Ovaries as if instinctively, and the generative intestine becomes, for the time being, an apparatus which is one and undivided, each organ being linked with the other to subserve the common end for which they are physiologically associated. The Uterus is, therefore, an intermediate organ, receiving its stimulus from the external

organs of generation, which call on it to act, and also from the central organs of generation, the Ovaries, from which it receives its power of action, together with the ovum on which it is to react.

If we turn our view from the healthy to the morbid conditions of the reproductive system, we shall find, that just as the Ovaries and Uterus exert a *physiological* influence on each other, so they are capable of mutually imparting and receiving a *morbid* stimulus. This subject I propose to consider under the following heads:—I. The transmission of inflammation from the Uterus to the Ovaries: and II. From the Ovaries to the Uterus.

I. Is Inflammation transmitted from the Uterus to the Ovaries? That inflammation may be transmitted from the Womb to the Ovaries, is admitted by all pathologists. They were first struck by the frequency of this occurrence in the puerperal state; and further investigation has convinced them, that at all times this transmission of inflammation is not uncommon. In proof of this, I may refer to an example of extensive ulceration of the neck of the Womb, which Madame Boivin has depicted in her Atlas, and with which an inflammation of the right Ovary was co-existent. Dr. Henry Bennet also assures us, that inflammation of the uterine appendages may be reckoned among the natural terminations of metritis. Dr. Doherty also states, that he has met with chronic ovaritis supervening in the course of malignant diseases of the Womb. But it is principally in that peculiar form of catarrhal inflammation of the cavity of the neck, where no ulceration can be detected, and where a diminished uterine orifice is closed by thickened mucus, that the transmission of inflammation to the Ovaries is most frequently observed. This is a very tedious form of Uterine Disease; and, after it has lasted some time, an additional source of suffering may arise; a deep-seated pain is felt in the ovarian region of one or both sides, and this may be followed by a distinctly perceptible swelling. Dr. Melier was the first to draw particular attention to this succession of morbid phenomena (*Mémoires de l'Académie Royale de Médicine*, vol. II). In a case which he attended with Dr. Roche, the patient had, for a year, been affected with catarrhal inflammation of the neck of the Uterus, accompanied by pain behind the pubis, when she began to experience a totally different kind of suffering in the iliac regions: and an ovarian swelling could be distinctly felt on the right side. Whenever the pain in the cervix was exasperated, the ovarian tumour became more painful; and on attempting to dilate the uterine orifice, Dr. Melier likewise increased the pain of the tumour. Dr. Melier has seen several cases of this description; and it has also fallen to my lot to witness some, in which so great a community of feeling existed between the two organs, that any increased inflammation of the Womb produced increased inflammation of the Ovary; and by subduing the uterine irritation, the ovarian was abated.

Ovaritis is then often a secondary effect of metritis. Sometimes, however, the two diseases co-exist; and then ovaritis is masked by the symptoms of metritis. Gendrin explains the simultaneous inflammatory seizure of the Womb and the broad ligaments, by the fact of the Womb, the Ovaries, and broad ligaments, obtaining their vessels and nerves from a common source. He might have added the common

sympathies, by which they are united for the same purpose. If idiopathic inflammation of the Womb can produce subacute ovaritis, it is evident that the same result may follow the use of those active agents, by which we seek to substitute a healthy inflammatory action for the morbid state of a tissue. M. Gendrin, whose name carries weight in such matters, states, that he has seen many cases of ovaritis, uterine engorgement, and metro-peritonitis, caused by deep cauterization, and, in some instances, even by the use of the nitrate of silver to the neck of the Womb, or by styptic injections into its cavity. But we have not only to fear the propagation of inflammation from the idiosyncrasy of the patient, or from the injudicious use of active escharotics, but likewise from the employment of various mechanical means which have been lately invented, and are now so much in vogue. I believe that the ordinary pessaries effect no good purpose, while they give rise to great irritation; and, with regard to the stem-pessary, I have seen it entail so much Uterine and Ovarian irritation, that (without denying the good results which may have followed its use in other hands), I do not intend to employ it again. When it is remembered, that many of the uterine deviations and flections, for which it is recommended, are congenital, and therefore cannot be permanently redressed; and that many of these deviations are as painless as they are frequent, whilst, in some patients, it has produced a fatal termination, I trust that I shall not be blamed for expressing so strong an opinion.[1] Further illustrations might be given from the works of Ricord, Mercier, and others; but I will now proceed to consider the second division of this paper.

II. Is Inflammation transmitted from the Ovaries to the Womb? We know that the Ovaries, in virtue of their governing influence over the Uterus, induce periodically a state of vascular turgescence in the walls of this organ; and it is not surprising to find that Ovaritis does induce frequently the exaggeration of this physiological state, or the inflammation of the inner surface of the Womb and of its neck, accompanied by the secretion of false membranes. But should this peculiar form of ovarian irritation last for some length of time, the texture of the Womb itself becomes altered. The posterior wall is at first felt to be soft, compressible, and painful to the touch; and, after repeated engorgements, the tissue becomes harder and more solid, very much like the tissue of an *erectile* tumour, or that of a fibrous growth. Thus enlarged, the Womb becomes liable to retroversion; and sometimes, even when it is thus displaced, it excites inflammation in the neighbouring peritonæum. False membranes are formed, which fix the Womb, and an irreducible retroversion may be the ultimate result. These statements have been made both by Dr. Oldham and Dr. Rigby; and as, on many other points of uterine pathology, these gentlemen are at variance, their agreement, in this instance, even if their observations had not been confirmed by others, goes far to prove their correctness.

The liability of the neck of the Womb to disease, under the influence

---

[1] I have more fully directed the attention of the profession to this and other points treated of in this memoir, in a work on *Diseases of Menstruation and Ovarian Inflammation*, now in the press.

of ovarian irritation, will be better understood, if we consider its anatomical structure. The neck of the Uterus is said to be constituted of muscular fibres, cellular tissue, and an external and an internal mucous membrane; but there is another and very important element of its structure, which has been overlooked even in our best and most recent works on the subject,—I mean the *erectile tissue*, which also enters into its composition. Dr. Eugène Forget has lately asserted that the erectile tissue (a continuation of that which lines the vagina), exists in the normal cervix; and that, as it forms a covering for the extremity of the penis, so it covers the surgical extremity of the neck of the womb.[1] It is evident, that the various stimuli to which this organ is liable, will exaggerate the condition of the normal structure which I have described, and thus give rise to those swellings, which are by some called inflammation, by others, engorgement; and which have been long since termed *erectile* tumours of the cervix uteri, by Professor Recamier. The correctness of this denomination will be evident, when we consider that these swellings are at first, and often for a long time, of an indolent, spongy, vascular nature, and only inflame when, from the increased effect of irritating causes, their epithelial surface becomes abraded. The immediate therapeutical bearings of the erectile tissue, as one of the elements of the neck of the Uterus, are important.

In proof of the influence of ovarian inflammation in production of these erectile tumours in the neck of the uterus, I quote the following case, lately published by Professor Recamier.[2]

Case. *Inflammatory Swelling of the Ovary, with an Erectile Engorgement of the Neck of the Womb.* I was consulted by Madame R., of Troyes, who, for the last eight years, had suffered considerably from ovarian irritation, attended by much pain in the right iliac fossa; sexual intercourse also produced intense suffering. Such had been the general state of the patient's health, though it varied for better or for worse. On examination, I found to the right, a little above the Uterus, an inflammatory tumefaction of the right Ovary, about the size of a hen's egg, which was very painful, even when gently touched. This tumour was distinctly felt by the *double touch*, the left hand pressing on the hypogastric region. There was also considerable erectile swelling of the anterior lip of the os uteri. The patient had little fever; I applied leeches to the right inguinal region, and ordered poultices, baths, etc. When the ovarian tumefaction was diminished, as there still remained some engorgement of the neck, it was cauterized three or four times, at four days interval. After seven weeks' treatment, the patient returned home perfectly cured.

The following case, similar in many respects, although varying in its results, will be found in Duparque's classic work on Diseases of the Womb.

Case. Menstruation became scanty, and disappeared in a woman

---

[1] In the course of the discussion on this paper, Dr. Snow Beck denied the presence of any erectile tissue in the neck of the womb; and his intimate acquaintance with the structure of this organ gives weight to his assertion. I have, however, consulted our great microscopical authority, Mr. Quekett, who admits the existence of a layer of erectile tissue covering the neck of the Uterus. He says that it is of similar structure to that of the penis, and to that which lines the vagina.

[2] Gazette des Hôpitaux, Feb. 1850.

HOSPITAL
STUDENTS' LIBRARY.

aged 25; she suffered from severe pain in the loins and in the left ovarian region. On examining her, I detected a very slight engorgement of the left angle and posterior lip of the Uterus; but I found a manifest tumour about the size of a small egg, in the left ovarian region. The tumour was painful, and I thought it ovarian. Venesection, and the application of leeches to the neck of the Womb, brought about a diminution of the uterine engorgement in the space of two months; but the ovarian tumour still remained the same. As the patient was too weak to bear any further loss of blood, I gave calomel, and ordered mercurial frictions to the inguinal regions; and in two months more, she had quite recovered from both affections.

The following case strengthens, still more forcibly, the position which I defend. It was observed by Dr. Letalnet, and communicated by him to Dr. Brierre de Boismont; they both believed that the Ovaries were primarily inflamed, and that inflammation was thence transmitted to the Uterus. It is to be regretted, however, that the state of the Ovaries was not minutely investigated.

Case. *Acute Ovaritis; Metritis; Inflammation of the Oviducts, and Peritonitis.* Madlle. A., aged 21, of a lymphatic temperament, menstruated for the first time, and without pain, at 13 years of age. At seventeen, she was affected with chlorosis; and the diminution of the menstrual discharge, which then took place, was accompanied with epistaxis. When in her eighteenth year, she felt, for the first time, a pain in the right ovarian region, which augmented at each menstrual epoch; and when the lady was under the influence of cold, hysterico-epileptic fits constantly attended the menstrual flow, which, however, remained regular as to the periods. She became afflicted with leucorrhœa, and also with a fissure of the anus, for which an operation was performed. At the menstrual period which immediately followed this operation, she suffered considerably, and the dysmenorrhœal symptoms became more and more considerable. The menstrual discharge, instead of being red, was now brown, then black, and at last ceased altogether to flow. When Dr. Letalnet first saw the patient, the hypogastric region was painful, the uterus was increased in size, heavy, and painful on being touched through the rectum. This uterine congestion was accompanied at all times by pains in the loins, particularly whenever the menstrual discharge began to flow. The patient's breath was fetid, her respiration rapid, she would lose her senses during an hour or two, and afterwards remain in a lethargic state for thirty-six hours. Notwithstanding the anæmic state of this young lady, bleeding (says Dr. Letalnet) was her only relief. The flow of blood was immediately followed by a decided improvement; and when the menstrual discharge appeared of its own accord, or was solicited by remedial means, the patient was sure to be well in two or three days. It was proved, not once only, but often, that venesection, or leeches to the hypogastric region, brought on the catamenia and epistaxis in this highly anæmic patient, and put an end to the hysterical fits.

Dr. Rigby affirms that he has never seen Ovarian Irritation to exist without some derangement of the Uterus; and Dr. Murphy informs us, that in many cases of dysmenorrhœa, he failed in relieving the patients while he addressed the whole of the treatment to the uterine elements

of the case (stricture or ulceration of the os uteri); and that it was only after more minute attention, and on finding that, in those cases, painful menstruation depended on subacute ovaritis, that he was able to cure it, by directing appropriate remedies to the organs previously affected. have seen similar cases; but knowing how easy it is to distort facts by looking at them through the fascinating prism of one's own peculiar views, I am gratified by having the sanction of high authority, when I advance even one case in support of an opinion which is not generally admitted.

Case. A married woman, aged 25, was admitted as a patient at the Paddington Free Dispensary for Women and Children. She was small in stature, of a sanguine constitution, and she had been married three years without issue. She complained of pains in the abdomen, of a slight discharge, and of dysmenorrhœa, attended by a profuse or a scanty flow. On examination, a little pain was caused by pressing the ovarian regions; the neck of the Womb was sound. Considering that the general health of the patient was in fault, I gave opening medicine and tonics, and ordered frequent injections with a solution of alum. This treatment was continued several weeks, the general health improved, and the discharge almost disappeared; but the pains in the ovarian regions became worse, and the dysmenorrhœa increased. I then ordered injections, mercurial ointment, and poultices to the inguinal regions, and the pain abated; but a fortnight afterwards, leucorrhœa reappeared, with pain in the back, and, on a second examination, I found slight ulceration of the cervix, which was red and swollen. Considering it therefore to be an ordinary case of ulceration of the neck, I cauterised it with nitrate of silver, then with the acid nitrate of mercury, and lastly with potassa fusa. Such was the treatment employed during the space of eight months, the patient being sometimes better, at other times worse, and sometimes remaining without treatment for two or three weeks. The ovarian pains likewise varied; but, three months ago, finding that they were very intense, and that they were augmented by walking or by pressure, and being tired by the pertinacity of the case, I made an exploration *per rectum*, and found the ovaries swollen, and very painful on being touched. I then ordered ten leeches to each inguinal region, and the regular rotation of blisters and mercurial ointment, besides cold enemata twice a day. The pains subsided, leucorrhœa ceased, and, a few weeks after, the neck of the womb was merely congested, but offered no ulceration. After the following menstrual period, I ordered a repetition of leeches, blisters, and ointment; and now the cervix is sound, the ovaries painless, and the patient well.

In this case, I think that Ovaritis produced the inflammation of the neck of the Womb, and kept it up until the primary disease was energetically treated. Now it seems to me, that if my explanation holds good, it may throw some light on Uterine Pathology. It is admitted, by all those who have contributed to our knowledge in this department, that one of the characteristic features of Diseases of the Womb, is their exasperating uncertainty. In some of those who suffer extremely, we find but very insignificant lesions; and when we have removed these, the patient sometimes suffers as much as before. Now we may believe that, in some patients, these symptoms are but a morbid reminiscence

in the nerves of the convalescent organ; and that a healthy excitement of the whole system is all that is wanted to relieve these particular nerves from their undue action, and to merge their own morbidly independent feelings into the general fund of excitement. But in many other cases of Uterine Disease, as in those observed by Dr. Murphy, or in that which I have related, we cannot cure the disease of the Womb, because we forget that beyond the Womb, preceding it in the development of the organs of reproduction, and governing them through life, are the Ovaries, which often participate in, and cause that uterine inflammation which we alone attack; and thus, while we temporarily seem to cure the small visible lesion, a hidden one remains to bring on relapses, and to perpetuate the patient's sufferings. In the treatment of those painful states of the neck of the bladder, so often caused by diseases of the kidneys, we depend much less on direct applications to the neck of the bladder, than on those means by which we can attack the kidney—the diseased organ. Should we not be governed by the same logic in treating diseases of the organs of reproduction?

Some may say, that I exaggerate the influence of the ovarian organs. It may also be averred that, by the treatment employed, I have only acted on the Womb, and that I have no *post-mortem* examination to offer in confirmation of my views. This may be true; but if an incontestable proof be required, that Ovarian Disease often exists unnoticed, and is erroneously referred to the Womb, I would refer to the last number of *Guy's Hospital Reports*, wherein Dr. Oldham relates a most melancholy case in point, and gives the particulars of a detailed *post-mortem* examination. Such a case is interesting in a scientific point of view, as representing similar cases not yet published, but which are talked of! And if this mistaking of Ovarian for Uterine inflammation can be made by men of eminence, may it not occur more frequently to the less distinguished?

42, Gloucester Road, Hyde Park, March 1850.

CASES OF PERFORATION AND OTHER LESIONS OF THE STOMACH, OCCURRING IN CONNEXION WITH DIABETES;

WITH REMARKS ON THE GASTRIC ORIGIN OF THAT DISEASE.

By WILLIAM MACINTYRE, M.D., Physician to the Western General Dispensary, Lisson Grove.

(Read at the Royal Medical and Chirurgical Society, March 27, 1849.)

"Les maladies impriment à nos organes des altérations tout-à-fait identiques à celles que certains agens physiques et chimiques peuvent déterminer. Il n'est donc pas étonnant qu'il existe des altérations organiques entièrement semblables à celles que produit sur nos tissus l'action d'un acide, et peut-être un commencement d'altération cadavérique. D'où la difficulté, dans quelques cas, de distinguer les altérations physiques ou chimiques des altérations vitales." CRUVEILHIER, *Anat. Patholog.—Maladies de l'Estomac.*

THE researches of the anatomist have thrown less light on the nature of Diabetes Mellitus, than might have been expected, considering the very marked characters of that disease, the singularity of its pathogno-

monic symptoms, and the opportunities for pathological investigation afforded by its extreme fatality. The lesions which have been found in fatal cases are common to other maladies; and, in their relation to Diabetes, may as justly be regarded in the light of secondary or accidental complications, as of original or essential elements. Hence, though, in individual instances, they may serve to account for certain symptoms, they are too inconstant and diversified to be taken as exponents of the specialities of this remarkable affection.

The information obtained from morbid anatomy proving so little satisfactory, it is not surprising that a theory of Diabetes, founded solely on a consideration of the phenomena observed during life, should have received very general assent; and that mere functional derangement, in which the assimilative processes are impaired or perverted, should have been deemed sufficient to account for the most notable of its symptoms.

This doctrine of mal-assimilation, found faintly traced in the writings of the ancients, was first clearly enunciated by Willis; but though embraced by several succeeding pathologists, among whom were Sydenham, Cullen, Dobson, Home, and Cullen, it is in comparatively recent times that it has received its full development, more particularly at the hands of Dr. Prout. In conformity with the whole theory of assimilation, so lucidly propounded by this writer, Diabetes may consist in an error of the primary assimilative processes, of the secondary, or of both; or in some unknown perversion of the proper functions of the kidneys, which permits newly formed sugar, whether derived from the aliments under erroneously exerted primary assimilation, or from the destruction of the gelatinous and other tissues, to pass off with the renal secretion unchanged.[1]

In support of these conclusions, may now be adduced the fact of sugar having, in several cases, been discovered not only in other secretions besides the urine, but also in the circulating system, in the intestinal canal, and, in one instance at least, in the stomach of a diabetic subject, who had been fed on a diet exclusively animal. This detection of the sugar, *en route*, as it were, to the kidneys, was, undoubtedly, an important step in the investigation, obviously leading us to look for the source of the unnatural product, rather in a vice of those processes of the animal economy which are engaged in elaborating, from alimentary materials, the proximate principles of the body, than in any fault of the emunctories through which it is cast out of the system.

These views, however, even if we admit them to be as true as they

[1] *On the Nature and Treatment of Stomach and Urinary Diseases*, p. 37. 1840. It is curious to observe how closely the language employed by Willis, nearly two hundred years ago, approaches, in some points, that in use with the iatro-chemical philosophers of the present day, when applying the doctrine of primary assimilation, and the ultimate metamorphosis and waste of tissues, to the explication of diseased processes. "Hunc effectum (miram dulcedinem sc. urinæ) ex eo quispiam oriri putaret, quòd unà cum sanguinis sero per renes excurrente, tum liquor recens nutritius, tum solidarum partium liquamina amandarentur; quâ re non improbabile videtur, dulcedinem istam ex succis hisce opimis, lotio permixtis, conciliari." (*Pharmaceutica Rationis*, sec. iv, cap. 5.) Willis goes on to explain, according to the chemistry then in vogue, the subsequent conversion, under the play of chemical affinities, of these bland and tasteless mingled juices, during their passage through the circulation, into the material which imparts to the urine in Diabetes its sweet and somewhat pungent qualities.

are ingenious, fall short of removing the whole of the difficulties with which the subject is beset. We have yet to learn what the precise condition of the digestive and assimilative organs is, which is capable of thus diverting them from the performance of their natural office, to play so strange and fatal a part in pathology. If we appeal to the morbid manifestations present during life, we find many of them, it is true, unequivocally denoting a great amount of gastric derangement, but neither singly nor collectively are they expressive of a special morbid action. The evidence from recorded dissections is equally inconclusive, and not a little conflicting. Like the kidneys, the stomach and its associated viscera have been met with as frequently sound as diseased. Rutherford and Baillie found the stomach always healthy in structure; Cullen and Home, generally so. In the second and third cases of three examples of the disease, detailed by Dr. Bright in his *Medical Reports*, the stomach and intestines presented either very little or no sign of disease; and in two post-mortem examinations by my friends, Dr. Roxburgh and Dr. Hare, at which I was present, these organs exhibited no very material deviation from the healthy state. On the other hand, in some of the recorded cases, indubitable proofs were found after death that the stomach had been the seat of an antecedent disease, more or less active. In one of Dr. Bright's cases, this viscus was small; while in the case related by Dupuytren and Thénard, in their very interesting *Mémoire*, it is said to have been greatly enlarged (*extrêmement volumineux, cinque à six pintes de capacité*), with unusual vascularity of its internal surface, and some degree of redness and thickening of the duodenum, the commencement of the jejunum, and the cœcum.[1] In a case examined by Dr. J. L. Bardsley, the organ was inflamed on its posterior surface, near the cardia, the inflammation being confined to the inner membrane, which was also slightly corroded by the gastric juice. One of the kidneys, in this case, was much reduced in bulk, weighing only ten drachms, but in other respects it was healthy. The same writer refers to another fatal example, in which the only lesion that could be discovered was a remarkably hypertrophied state of the duodenum.[2] In four cases examined by Berndt, the kidneys were free from disease; in two of them, the stomach was immensely enlarged,—a natural consequence it was thought, of the enormous quantity of food and drink swallowed.[3]

As far, therefore, as the testimony hitherto furnished by pathological anatomy avails, we find ourselves either forced to give up the doctrine of the gastric origin of Diabetes as untenable in the great majority of cases, or to suppose that a function, essential to the maintenance of life, may become fatally deranged without the occurrence of coincident lesions of organization. There is, however, one source of information which does not appear to have been sufficiently interrogated: I allude to the 'gastric fluid,' which, as the primary agent employed in converting alimentary matters into the proper pabulum for assimilation, may not unreasonably be supposed, in a disease like Diabetes, to have suffered

[1] Mem. sur le Diabète Sucré. Journ. de Méd. Août. 1806.
[2] Cyclopædia of Practical Medicine. *Diabetes.*
[3] British and Foreign Medical Review, vol. ii, p. 180.

important changes in composition and properties analogous to those observed in other secretions, when the organs which supply them are structurally or functionally deranged. This notion is not new; it was entertained by Rollo, whom we find explicitly referring Diabetes to an increased morbid action of the stomach, with too great a secretion, and *an alteration of the gastric fluid*, forming or evolving from vegetable substances, saccharine matter, which is quickly separated, and passes off, as a foreign ingredient, by the kidneys.

Rollo seems to have been led to his conclusions solely by the character of the general symptoms, and the effect of the particular dietetic treatment which he so strenuously advocated. It still remains a point undetermined, experimentally, whether the digestive fluid in Diabetes is altered in its constitution or not; for chemistry, in its exploration of the *primæ viæ* in this disease, has, as yet, limited itself to a search after sugar among their contents; and anatomy, as we have seen, has contributed little to solve the question. In this dearth of facts bearing on the subject, it was not without some interest that, in three fatal cases of the complaint which have fallen under my own immediate observation, I met with appearances in the stomach strongly significant of that organ having been, at some period, subjected to the action of an energetic and destructive agent. The detail of these cases I now submit for consideration, as favouring that theory of the disease which seems to accord best with the rise, character, and succession of its symptoms, while it is, in the main, consistent with approved physiology.

Case I. J. W., a married man, of short stature and dark complexion, consulted me on the 16th of March, 1841, for Diabetes. He gave the following account of his illness. Five years before the above date, he passed through a violent and protracted fever, which had nearly carried him off. After recovering from the fever, his appetite became keen, and he indulged it freely. He soon got very stout, weighing fourteen stone, but did not regain strength in proportion. About fifteen months ago, he began to be tortured with urgent thirst, which the most copious draughts of liquids of every description, often to the extent of ten or twelve quarts a day, could not quench. About the same time, he noticed that he made water frequently, and in large quantities; but it was not till within the last twelve months that the real nature of his complaint was determined by a proper examination of his urine. When he applied to me, he was passing twelve pints daily; it was of a pale colour, of specific gravity 1038, very sweet, and of honey odour. It was slightly acid, free from albumen, and apparently abounding with urea; some of it, concentrated in a watch glass, and treated with nitric acid, yielded nitrate of urea largely, though no preliminary process had been employed to destroy the sugar. A pint gave, on boiling, one ounce and six drachms of syrupy extract; and four ounces, allowed to evaporate slowly, left a considerable residuum of saccharine matter in a granular form.

All the symptoms which mark an advanced stage of Diabetes were now present; such as dry skin, red and glazed tongue, urgent thirst, voracious appetite, emaciation, depression of spirits, and extreme prostration of strength. There was also a teazing cough, with flatulence and irregularity of the bowels, which were sometimes constipated, but generally relaxed.

The patient had, for some time, observed a regulated diet, restricting himself to two eggs and bread and butter for breakfast, half a pound of beef-steak and rice for dinner, and the same quantity of meat, or two eggs, for supper. He was not, however, able to put equal limitation to his drinking, for he found thirst far more uncontrolable than hunger; but he now managed to do with six pints of liquid, instead of twice that number of quarts, in twenty-four hours. His usual beverage was small beer, and, at one time, he was a "tea-totaller"; but before his first illness, he was in the habit of indulging to excess in the use of spirits and malt liquors.

He was recommended to continue the diet at present in use. Dover's powder was prescribed to be taken at bed-time, and castor oil every morning, as, from a tumid state of the abdomen, fæcal accumulation was suspected; and such proved to be the case, for during several days in succession, he passed enormous quantities of solid fæces of a dark colour. Between the 16th and 25th, he also took three doses of calomel, always feeling stronger and more lively after the bowels were unloaded.

On the advice of Dr. Watson, he was now ordered to take a drop of creasote thrice a day, and to continue the Dover's powder.

Under this treatment the urine fell to nine pints, and, on the 4th of April, its specific gravity was down to 1032. There was, however, no corresponding improvement of the patient's general health; and, as he was suffering from a catarrh or influenza, prevailing at the time, the creasote was discontinued, and a cretaceous mixture prescribed to restrain a troublesome diarrhœa. Shortly afterwards, he removed into the suburbs of town, and I heard nothing of him till called to see him on the 18th, in consequence of his labouring under constipation. The abdomen was then tumid and hard, but free from pain, and there was not the slightest febrile movement. All the usual means for overcoming obstruction were resorted to, but ineffectually; he sank rapidly, and died next day. The urine had continued at about nine pints daily, the appetite had fallen off, but the thirst had abated nothing of its intensity. The patient, who was a very intelligent man, retained his mental faculties entire to the last.

Inspection. The body, which was examined by Mr. Anderson, was extremely emaciated, and a quantity of dark brown fluid was seen flowing from the mouth.

On opening the thorax, the presenting lungs appeared healthy, but, on section, were found to be gorged with blood posteriorly. The left upper lobe was broken down in the centre into a softened purulent mass, more like the disorganization of unhealthy inflammation, than a tubercular vomica; and neither around this space, nor in any other part of the organ, could tubercles be detected. The pericardium was healthy; the heart collapsed and flabby; its walls attenuated, those of the left ventricle to a marked degree, scarcely equalling the right in substance. The endocardium was pale, and the little blood which the organ contained was uncoagulated and thin.

The small intestines, the ascending colon, and its arch, were prodigiously distended with air; the descending colon, the sigmoid flexure and rectum, were crammed with solid fæces. There were no marks of inflammation visible throughout the whole track of the intestinal tube, but, on the contrary, an unusual bloodlessness.

The stomach was greatly dilated, and its walls very thin; its cardiac extremity presented a dark appearance under the peritoneal tunic, and its lining membrane was soft, but free from ulceration or erosion. The blood-vessels of the viscus were unusually large and turgid. The spleen and pancreas were healthy; the liver was wanting in firmness, but presented no other alteration from its natural appearance. The kidneys were much enlarged, of double the ordinary weight, and some what lobulated. The bladder was natural; the vesiculæ seminales turgid.

Mr. Dalrymple made an examination of both kidneys. The right freely received an injection of coloured wax; the left, on section, appeared healthy, and, under the microscope, displayed the natural structure. He remarked that the blood in the veins had a bright brick-dust tint. A similar remark had been made by Mr. Anderson, at the dissection, respecting the blood in the vessels of the mesentery.

Case II. This case I saw, with Dr. Cumming, on the 4th of March, 1843. The patient, aged 38, steward in a club-house, had been under treatment, for a fortnight, for an extensive aphthous affection of the mouth, tongue, and fauces, accompanied with much constitutional disturbance, great debility, depression of spirits, and emaciation. Under the use of the ordinary general and local remedies, the incrustations fell off, leaving the mucous surface stripped of its epithelial covering. The constitutional symptoms became aggravated, with the addition of tenderness in the epigastrium, and irritability of the stomach, causing the rejection of even the blandest liquids, as soon as they were swallowed. The supervention of these gastric symptoms led to the belief of an extension of the throat affection to the stomach, resulting in *diptherite*, of which the condition of the mouth, in general, was supposed to be the harbinger. At my visit, the vomiting was going on, with prostration of all bodily power, cold surface, feeble pulse, anxiety, and craving for cold drinks. The tongue, the inside of the mouth, and the fauces were red and glazed.

The patient, we were told, had been getting thin for some months, but had wasted rapidly during the last fortnight. The bowels had been kept regular by mild aperients. The urinary excretion was reported to be natural; but, on inspecting the chamber utensil, it was found nearly full of limpid urine, which had been voided in the course of the afternoon. On further inquiry it was ascertained, that he had been in the habit of passing still larger quantities, which he attributed to the use of sweet spirits of nitre. As the presence of albumen in the urine was not manifested by heat, we inferred, from the correspondence of the general symptoms with the profuse diuresis, that the disease was Diabetes. The treatment was directed solely in reference to the gastric symptoms, but none of the measures resorted to availed in alleviating these, or in averting the fatal issue, which took place two days after this visit. The urine was, in the meantime, subjected to the usual examination, and found to be sweet, of specific gravity 1038, to yield a syrupy extract on evaporation, and to ferment briskly with yeast.

Inspection, forty-eight hours after death. The body was much emaciated. It was free from obvious cadaveric decomposition, but exhaled the peculiar odour generally perceptible in cases of Diabetes, and which

had, in this instance, been observed in the patient's breath. The contents of the chest were healthy. The small intestines were distended with air, and of an erythematous hue, but free from effusion or agglutination. The stomach was observed to be remarkably large and flabby, and, on being raised for further examination, it gave way posteriorly at its large curvature, allowing the escape of a dark grumous fluid into the cavity of the abdomen. Its walls around the rent thus made were soft, and, throughout the entire splenic division, reduced to extreme tenuity, being, in some places, almost diaphanous. The appearance of softening and thinning lessened towards the pylorus, but could be traced faintly some way into the duodenum, where it was lost. On the internal surface of the stomach, several red patches were seen, some of them verging to black, others covered with a dark grumous exudation. The liver was hard, and of a dark colour. The left kidney, much larger than natural, was congested; its exterior was rough and firmly adherent, in places, to the investing membrane; its pelvis contained a purulent fluid. The right kidney presented, in a less degree, the same appearances.

Case III. The subject of this case was a little girl, five years old. She was brought to town for medical advice on the 25th of February, 1845, when I saw her for the first time. She then made no complaint of pain, but betrayed signs of much languor and debility. She was a good deal reduced in flesh; her eyes were dull, with drooping of their upper lids; she sighed often, and exhibited an expression of unwonted sadness. Both cheeks were flushed, but quite cool, and the temperature of the surface generally was under the natural standard. The breathing was short, and attended with the abnormal play of the alæ nasi usual in dyspnœa, but the patient was able to make a full inspiration when desired. There was no cough, and the chest was resonant throughout. The tongue was furred, the gums red, and the breath rather offensive; the abdomen was tumid, but not tender on pressure.

I learnt from the child's father, who had been educated for the medical profession, that she had been five weeks under treatment, in the country, for what was considered to be remittent fever; but that the case was not well defined, and had resisted the ordinary remedies, among which mercury, in the form of grey powder, was freely used. He further stated, that ten days before she left home, attention was drawn to her passing urine frequently and in large quantities, amounting sometimes to several pints in the day; it was reported to contain neither albumen nor sugar.

On this visit, I merely prescribed an aperient of rhubarb with a few grains of mercury and chalk, until an examination of the urine should be made. That examination, instituted the same evening, cleared away the obscurity which had hitherto veiled the case, by furnishing abundant proofs of the existence of Diabetes Mellitus. The urine voided during the day, on being boiled with liquor potassæ, exhibited the rich claret colour which results from the combined action of heat and caustic alkali on grape and Diabetic sugars. Further evidence of the presence of saccharine matter was supplied by Trommer's test; and in a short time, the actual sugar was obtained by evaporation, in the form of a syrupy extract, closely resembling honey in appearance and odour. The specimen

of urine operated on, was perfectly transparent, nearly colourless, of acid reaction, and high sp. gr. (1042). It contained no albumen.

Next day, March 1, the patient, after a restless night, was worse, evincing increased debility, languor and exhaustion, with constant sighing, and the most marked dejection of spirits, but without making any complaint of pain or uneasiness. The urine had been moderate in quantity during the night, but became profuse after she left her bed, and reached the high sp. gr. of 1045. Acting on the indications furnished by the characters of the urine, the plan of treatment was now modified. As the bowels had not acted recently, a dose of castor oil was given, the patient ordered to bed, and the acetate of ammonia, with compound tincture of camphor prescribed, to be taken at intervals, and a warm bath in the evening.

On the 2nd of March, at the morning visit, some improvement was observable. The patient had gone to sleep after the bath, passed a tranquil night, and was now cheerful and inclined to join in the amusements of the other children. No perspiration had followed the bath. The bowels had acted freely, discharging several flattened masses of clay-coloured fæces. The urine was as copious as before, but had fallen in density to 1035. This slight amendment, however, proved transient; towards evening the languor and exhaustion returned, and, though another tranquil night followed the bath, the prostration of strength was next day so great, that she did not wish to leave her bed.

On the 4th, matters were not improved. The thirst continued urgent, food was taken with avidity, but the strength continued to decline, and the eyes looked sunken, rolling listlessly in their sockets. During the night, she had had some sleep, but moaned frequently; and, for the first time, complained of pain in the left hypochondrium, where she occasionally kept her hand applied. Some tumidity from flatus was observable in this quarter, but no manifestation of pain was elicited by pressure.

On the 5th, it was agreed, in consultation with Dr. Ferguson, to give small doses of the tincture of muriated sesquichloride of iron and laudanum —five minims of the former, and two of the latter, every six hours.

The case, henceforward, rapidly pursued its fatal course. After the third dose of the medicine, a tendency to drowsiness appeared, on which account the opium was withheld; the appetite failed; and towards the close of the following day, the power of swallowing was lost. The patient continued to sink, and expired, exhausted, on the 7th. The condition of the urine was examined daily, and found not to vary much in quantity till the last two days, when it was reduced from its usual amount of four or five pints, in twenty-four hours, to two. Rather less than a quart of that passed on the 1st, having a density of 1045, yielded a thick extract, which had the appearance of honey, and in the course of a few days granulated into a fine saccharine mass of a pure white colour.

Inspection. In consequence of some difficulty in making arrangements for a post-mortem investigation, the body was not opened till seventy hours after death. The examination was made by Mr. Shaw and Mr. Forbes. There was considerable emaciation, but no sign of cadaveric decomposition. The head was large and well formed. The calvarium was easily detached from the dura mater, which was free from undue vascularity. The vessels of the pia mater contained bright blood.

There was a moderate effusion of serum between the convolutions. The medullary portion of the brain presented a darker colour than natural, with scattered red points. The substance of both the cerebrum and cerebellum was unusually firm and dry, and no serum was found in the ventricles; nor tubercles in any part of the organ or its envelopes. On opening the chest, the upper lobes of the lungs appeared healthy. On the right side, a few fibrinous filaments were seen connecting the pulmonary and costal pleuræ, but these membranes presented no other vestige of pre-existing inflammation. Both lungs yielded a hollow sound on percussion, floated in water, and were found perfectly free from tubercular deposit; but their tissue, near the margins, had a condensed fleshy character, resembling that of very young children, in whom the vesicular structure of these organs is not completely unfolded. The inferior lobe on the left side was dark-coloured, and somewhat congested. The colour of the left inferior lobe seemed to be owing partly to stasis, and partly to this portion of the lung being steeped in a dark sanguineous fluid, which, to the amount of several ounces, occupied the lower part of the pleural sac. When this fluid was removed, the cavity of the chest was seen to communicate directly with the stomach by one large, irregular hole in the walls of that viscus, and several smaller perforations in the diaphragm, which were of an oblong shape, and separated from one another by narrow strips of the muscle, still entire. The openings in both corresponded exactly, but no adhesion existed between the apposed surfaces around. The structures bordering on the perforations were black and thin; and the parietes of the stomach, throughout the whole of its large division, partook more or less of the attenuation, but the pyloric portion was of natural colour and consistence. In the lining membrane were seen several ecchymosed spots, but no signs of active inflammation. The organ was nearly empty, but it was ascertained that none of its contents had escaped into the abdominal cavity. The intestines were also nearly empty, with the exception of the rectum and lower part of the colon, which contained numerous dry scybala. The spleen was small, black, and readily lacerable; the liver and pancreas healthy; the mesentery free from tubercles or glandular disease. The fat surrounding the kidneys was remarkably dry and firm. These organs themselves were also dry externally, but of normal size, appearance, and structure. In the pelvis of the left kidney, a few drops of puriform fluid were found. The bladder was capacious, and half-filled with urine. The extravasated fluid taken out of the chest was free from smell; and, on microscopical examination, was found to contain blood-globules largely, epithelium, and textural detritus.

Remarks. I am sorry I cannot dwell with any satisfaction on the treatment of the foregoing cases. In all of them, the disease was fully developed when they came under observation; and in two of them, indeed, it had neared its close, not even admitting of palliation. The first case afforded a brief space for the trial of remedies; and creasote, the only article employed with a specific intent, exerted, as I have observed in other instances, a decided restraining effect on the evolution of saccharine matter; but no permanent advantage accrued, owing to serious complications in the lungs, kidneys, and other organs.

The structural changes found after death, however, claim more consideration; and may, I trust, justify some remarks on those points which appear to possess interest as mere facts, or seem to bear on the subject of the pathology of this singular disease.

The examinations in Cases I and II, were conducted with due care; but, as limits were put to their prosecution, they were necessarily incomplete, though in one particular, at least, important, as disclosing an unnatural condition of the stomach.

In the third case, the dissection supplied matter for more comprehensive details, all the great cavities having been minutely explored by a practised anatomist. On this account, I will address myself to that case in the first instance, though it is last in the order of narration; referring, in commenting upon its prominent features, to the analogous or identical appearances presented by the other two. The case is also, perhaps, entitled to a leading position from some special passages of practical importance in its history, as well as from its having been less complicated than most cases of the disease with concomitant structural changes, to which it is often difficult to allot a true place in the chapter of causation. This little patient, at her age, and under the circumstances of domestic comfort in which she was reared, could not have been exposed to the usually alleged causes of Diabetes; such as cold, intemperance, and excesses of an enervating character. Hence the case may fairly be regarded as a genuine type of the disease in its purest form, and, as such, enhancing the import, in an etiological respect, of the only remarkable lesions discovered after death.

The first circumstance in the history of the case claiming notice is, the tender age of the patient. Diuresis is not uncommon in children; but though the urine, under that condition, is changed from its natural constitution, the alteration usually consists in an excess of phosphates or urea; and though examples of the saccharine impregnation have now been seen in sufficient numbers to prove that Diabetes is not confined to any particular period of life, the proportion is small in which it has been shewn to have existed in a subject so young, to the amount it did in the present instance. This child's urine attained a density which I have not often met with in the adult. According to Dr. Henry's table, the patient, with her urine at a specific gravity of 1,040, and 1045, was passing daily, by one emunctory alone, no less than seven or eight ounces of solid matter; the principal part of which, under a healthy exercise of the natural functions, would have been appropriated to the purposes and requirements of the system.

The next point to be noticed in the history of the case is, the rapidity of its progress. Diabetes being, in its early stage, characterized by no specially distinctive symptom, we have always a difficulty in assigning a determinate date to its origin. In this case, however, I was assured that, till three months before I was consulted, the child was in high health and spirits, with the exception of a short interval of lowness in the month of August, on the death of her mother. To this event the friends, on inquiries being made as to exciting causes, ascribed the present illness; and, on being made acquainted with the singular nature of the disease, added, that the patient had been in the habit of indulging in the immoderate use of sugar, both as an article of diet and a

confectionary. The falling away from health did not attract serious attention, till about the middle of January. The symptoms then partook so much of the character of remittent fever, that they were treated by mercurials and the usual remedies indicated by hepatic and intestinal derangement, The mercury, failing to make any favourable impression on the complaint, had been discontinued for a week or ten days previous to her coming to town. It was before I had satisfied myself of the real nature of the complaint, that I prescribed the grey powder, and I could not help ascribing to its employment the increased prostration observed next day. The improvement which followed a change of treatment, gave a gleam of hope, which, however, was soon extinguished by the urine again increasing in density, with corresponding aggravation of all the symptoms.

Finally, the case affords an instructive illustration of the importance, in all obscure and intractable complaints, of availing ourselves of the diagnostic indications furnished by the urine, even when the existing symptoms have no direct or obvious reference to the urinary organs or their function. In such cases, it will not be enough to consult the sensible qualities alone of the excretion, which frequently give but vague and ambiguous information; the application of chemical reagents or tests, and, occasionally, analytical research, will be required to reveal the morbid alteration. In Diabetes, we now fortunately possess means of readily detecting sugar in the urine, even at an early stage of the disease, and when the amount of the foreign ingredient is too inconsiderable to give any intimation of its presence, by the colour, taste, or density of the fluid.

On entering upon the post-mortem examination of this case, the first circumstance which struck us was the dry condition of all the tissues of the body—integumental, membranous, and parenchymatous. Scarcely any blood followed the division of the scalp or the removal of that covering. The membranes of the brain were no less dry, and the central cavities of the organ did not contain a drop of fluid. The unusual firmness of the cerebral substance equally shewed the general deficiency of moisture. This condition was not so evident in the lungs; but it was the only deviation from the natural appearance of the kidneys that we could discover, the fat in which they were imbedded having the look and consistence of ordinary suet. Even the fæces were fashioned into hardened balls. There is, perhaps, no occasion to look for an explanation of this arid state of all the structures, beyond the profuse and incessant drain which had been going on by the kidneys. Search was made for tubercles, so commonly met with in protracted cases of Diabetes; but none could be found, nor any analogous deposit, either in the membranes or the parenchyma of the brain, lungs, liver, intestines, or mesentery. In the lungs, the only abnormal appearance of any note was the condition of the pulmonary texture, which I have likened to fœtal lungs, and which was probably the consequence of feeble and incomplete inspiration, rather than a result of positive disease.

We now come, in the course of the post-mortem examination, to consider a group of appearances and changes, which, in interest and significance, have yet higher and more direct claims on our attention:—I allude to the extreme attenuation of the coats of the stomach in all the

cases, and the perforations in the diaphragm and stomach in one of them; both conditions—the tenuity and loss of substance—allying them to each other, and marking, apparently, but different degrees of a kindred disorganization. In the first case, the stomach was much thinned, and its cardiac extremity presented a dark appearance, but without either abrasion or ulceration. In the second case, the walls of the organ, throughout the whole of its large division, were singularly attenuated, almost translucent, and tearing under the slightest force, the mucous membrane immediately adjoining the rent being black and softened. The condition here seemed to mark a much more advanced stage of a change similar to that which had been going on in the former case; if it did not amount to complete loss of substance, it had certainly reached the limits of textural consistence and continuity. In the third example, the same extensive attenuation was observed, and the wasting process seen consummated in perforation, actual and unequivocal; for, from the order in which the dissection was conducted, the perforations in the diaphragm and the breach in the stomach were brought into view before either of these parts was disturbed by handling or traction.

In considering the nature and import of these appearances, the first question to be solved is, whether they are to be regarded as pathological lesions—the work of disease during life, or cadaveric changes—the effects of a destructive process, set up and carried on in dead animal tissue.

As respects the actual perforations in the last case, I think we are constrained to consider them as post-mortem appearances. Their extent, irregular and ragged form, and the thin condition of their edges, distinguish them from the small, circular, and well-defined penetrating ulcer, with which we are so well acquainted, as the result of chronic inflammation and malignant disease. The non-existence of extravasation into the cavity of the peritonæum, the absence of all traces of inflammation of that membrane, or of adhesions between the stomach and diaphragm, and the exemption of the patient from the tortures which invariably announce perforation and consequent extravasation, are circumstances not less inconsistent with their having existed during life.

Under this view of their production, they might naturally be classed with those perforations or erosions which, from the time of John Hunter, have been attributed to the digestive or solvent action of the gastric juice subsequent to death. The facts which led that distinguished observer to this conclusion, occurred in cases of sudden death from violence, injuries of the head, and strangulation. He supposed, that under such circumstances, the stomach had been rendered incapable of resisting the digestive powers of the fluids generated within it, in consequence of its coats being suddenly deprived of their vitality at a time when the body was healthy, and the gastric secretion in full activity—that, in fact, to use the quaint phraseology of a French writer who adopts Hunter's views, in these cases "the stomach devours itself." This opinion would seem to be corroborated by experiments subsequently made on the lower animals, by Wilson Philip, Carswell, and others; but the subject is not without its difficulties, not the least of which is the rarity of the appearances in question, while the circumstances under which they were first noticed are common enough. Even as to their comparative frequency, there is a remarkable and unaccountable discrepancy among

competent and trustworthy observers. Hunter represents their occurrence as very common, few bodies, according to him, being examined without exhibiting more or less digestion of the stomach, and not unfrequently actual perforation, not only of its walls, but also of the contiguous diaphragm, allowing the contents of the stomach to pass into the cavity of the chest. On the other hand, we find Mr. Taylor, in his work on medical jurisprudence, stating, that during a period of fourteen years, there is the record of only one case of spontaneous Perforation of the Stomach being met with in the numerous inspections made at Guy's Hospital. His statement is borne out by the testimony of several of my professional friends, who have favoured me with the result of their large experience in the dead-house and dissecting room. To some of them, actual perforation has never presented itself; while those who have observed perforation have not met with it so frequently, considering their opportunities, as might have been expected, on the supposition that Hunter's representation is correct.

It was probably from considerations like those just stated, that Andral, Abercrombie, and others, hesitated to adopt Hunter's theory. The whole subject, however, has acquired additional interest and increased importance, from the fact that these perforations and the other structural changes under review have, since Hunter's time, been noticed in connexion with various diseases, some of them of a decidedly gastric nature, others not primarily referable to the stomach, but, in most cases, attended with gastric symptoms.

Softening and attenuation of the stomach would appear to be a frequent lesion in phthisis. In ninety-six cases in which that organ was carefully examined, Louis found it attenuated nineteen times, and in some of these so destitute of firmness as to give way under the slightest traction. He has several times seen the stomach perforated; but, from the absence of peritoneal inflammation, is of opinion that the perforations had not existed during life. The details of five or six cases are given in his work on Phthisis. In one of the most notable, which presented, on inspection after death, a rounded hole to the left of the cardia, there had been, from the outset of the illness, marked loss of strength, soon followed by œdema of the legs; variable appetite, at first impaired, subsequently keen, the patient constantly asking for food; red and dry tongue for a period of four months, with clamminess of the mouth and urgent thirst.

So far back as 1824, Dr. John Gairdner published an account of four cases of infantile disease occurring in his own practice, and two from Cruveilhier, in which softening, erosions, or Perforations of the Stomach were found after death.[1] In accounting for their production, he adopts the Hunterian theory,—so far, at least, as respects the perforations, which he does not consider to be morbid lesions, but post-mortem changes. The symptoms in these cases had been obscure, denoting only slight febrile disturbance; but the prominent features indicated intense irritation of the stomach and alimentary tube. Along with more or less vomiting and diarrhœa, there were signs of ardent thirst, generally avidity for food, and, in all the cases, early and excessive languor

[1] Transactions of the Medico-Chirurgical Society of Edinburgh, vol. i.

and debility. These characters cannot fail to remind us of the train of symptoms which accompanies Diabetes, but the state of the urinary secretion finds no place in the histories given. The same omission is observable in the details by Louis; and, what is still more strange, this great historiographer of disease, and the earnest advocate for the necessity of our inquiring into the condition of every function, in order to guide us to a correct estimate of post-mortem appearances, rarely records the condition of the kidneys; for in sixty-one cases illustrating phthisis under its various forms and complications, it will be seen that he notes the state of the urine in no more than five or six, and in these very cursorily.

Dr. Gairdner has also collected from other sources, and placed in a tabular form, several cases presenting appearances closely resembling those which fell under his own notice, and which he regards as having been primary affections of the alimentary canal. To these he has added a second series, presenting analogous appearances, but complicated with other lesions, and occurring in diseases not directly nor primarily referable to the stomach and bowels; the most common being inflammation of the cerebral meninges, pneumonia, puerperal peritonitis, and convulsions; and, next to them, tubercular disease of the lungs and other parts. Of the first group, the subjects were infants or young children, all but one being under two years of age; of the second, or consecutive series, several were adults.

In which of these groups we are to place the cases which I have detailed, may admit of doubt. My own impression may be inferred from my having brought them forward in support of the gastric origin and nature of Diabetes. It is true, that the amount of facts is too small to warrant deductions of conclusive force; but, in a rare disease, the coincidence, in three successive cases, of appearances so remarkable and nearly parallel, will hardly admit of being regarded as purely accidental; while there are considerations which seem to connect such coincidence with a common cause as yet unknown.

Though it is difficult to withhold our assent from the conclusions of Hunter, under the particular circumstances which he mentions, his theory, as we have seen, is, in some respects, unsatisfactory, and evidently not applicable to cases like those just related and referred to. In many of these cases, one of the first conditions upon which the theory is based—the abundant presence of digestive fluids in the stomach—must have been wanting, seeing that, for a long period before death, food, the natural provocative to an out-pouring of the gastric juice, had either not been taken, or, if taken, had been rejected as soon as swallowed. Then, as to the lesions or changes in question, it may be observed, that they bear but a distant resemblance to those effected on animal matter when subjected to the action of the gastric fluid, either in the interior of the stomach during ordinary digestion, or out of its cavity in the hands of the experimenter. There is a striking difference between the brown, dark, grumous, and viscid liquids usually described as constituting the contents of the stomach under these perforations, and that light-coloured, pultaceous, and homogeneous substance, which we regard as chyme, the product of digestion; while the charred and tattered appearance of the invaded structures of the organ, seems to represent rather the rough vestiges of a destructive escharotic,

than changes brought about by a slow physiological process, or a gentle chemical solvent. This difference, alone, would lead us to take a modified view of the theory of simple solution, and to regard the successive changes from softening to attenuation, and from attenuation to complete loss of substance, not as the work of the gastric juice in a normal and healthy condition, but as the effects of that fluid in an altered or vitiated state; or of other products secreted by, or generated in the stomach, and endowed with corrosive properties; in fine, that under certain diseased conditions of the system, a peculiar action is set up in the organ, and carried on to an extreme point during life, but not completed till after death, when the tissues, already enfeebled and wasted, and no longer defended by the vital forces, become the easy prey of some destructive agent. The sweat, the tears, the nasal and bronchial mucus, the bile, and the urine, are known to be capable of acquiring acrid and deleterious properties. That the gastric juice is susceptible of changes is not merely an inference deduced, long ago, from observations on dyspepsia, but a fact demonstrated by experiment. In the case of Alexis St. Martin, Dr. Beaumont found that errors in diet, febrile excitement, fright, and other mental emotions, caused a material alteration in the appearance of the digestive fluid, modified its action, and sometimes entirely checked its secretion. That other fluids of an injurious nature will, under certain states of disease, both general and local, be secreted by the stomach, or evolved in its interior, is equally a matter of observation. In Diabetes, the sugar abounding in the *primæ viæ* will at once suggest a fertile source of products of most active qualities. Those with which we are best acquainted are the lactic and oxalic acids, both of them hostile to the constitution; the latter eminently so. The probability of a development of deleterious agents of the kind now alluded to, occurred to the reflective and philosophic mind of Dr. Prout, irrespectively of any considerations based on morbid anatomy. In treating of the general pathology of the assimilative processes, that writer observes, that "derangements of the *converting* function of the stomach occasionally constitute an original disease, the effects of which are still more formidable than those arising from disordered reduction. Thus, in diabetic affections, the reducing function of the stomach seems, in some instances, to be almost morbidly active; and farinaceous (and even other) matters, are reduced to the condition of low, saccharine matter, which the converting function of the stomach is incapable, as in health, of changing into the elements of chyle or blood. The consequence is, that this reduced or dissolved saccharine matter is taken up with the little chyle that may be formed; and after producing various derangements in the transit through the system, is ejected with the urine. Again, the converting process may be wrongly performed; the saccharine matter, for instance, instead of being converted into chyle, may be converted into oxalic, lactic, or other acid and deleterious matter, which may not only produce much local discomfort, but serious disorder in their subsequent passage through the sanguiferous system and kidneys, or even through the bowels.[1]"

It must, however, be granted, that the evidence of demonstrative

[1] Nature and Treatment of Stomach and Urinary Diseases, p. xliii.

chemistry is still required for the verification of these views and opinions. How far they are supported by the limited number of facts now adduced from anatomy, must be determined by future and more extended observations, which shall establish or disprove the general coincidence of Diabetes with the lesions and alterations which I have described. I therefore leave the inferences which I have drawn, as conjectures only, which may or may not be well-founded, but which, in the present state of our knowledge, will not, I trust, be deemed altogether unwarranted by the premises. In diseases which are both mysterious and fatal, the temptation to speculate is always strong; and I may, on the present occasion, have yielded too readily to the enticement, and so have given undue extension to this paper. I am more at ease with respect to another cause of the length which the communication has reached—the space, namely, which has been devoted to the complications met with in the several cases. It is scarcely necessary to observe, that no description of a case can be complete without a full account of its complications. These are rarely absent in any disease, however determinate and unequivocal its nature; and cannot, indeed, be disregarded by the practitioner; for, in whatever relation they may stand towards the dominant malady, they always constitute a serious element of perplexity or danger, embarrassing the diagnosis, thwarting the best devised remedial measures, exasperating sufferings, and, in fatal cases, often precipitating the inevitable crisis. In those diseases, again, whose nature is still obscure and undetermined, they seem no less deserving of attention and commemoration from their bearings on a true pathology. The history of medicine shews that, in not a few instances, what had been long known and received as a mere complication or frequent accessory, has proved to be the primary and real malady; and it is thus, probably, that, in the progress of pathological investigation, Diabetes will eventually be withdrawn from the category of urinary diseases strictly so called, and the kidneys, absolved from all blame in its production, be looked upon as really engaged in the friendly office of ridding the system of a pernicious poison.

London, March, 1850.

PROVIDENT DISPENSARIES: THEIR SOCIAL IMPORTANCE, AND THEIR ADVANTAGES TO THE MEDICAL PROFESSION.

By HENRY L. SMITH, Esq., Surgeon to the Eye and Ear Infirmary, Southam, Warwickshire.

The formation of Provident Dispensaries is a subject to which I have, for upwards of thirty years, directed my attention. The plan, therefore, which I desire to propose is not a speculative opinion, but the matured result of practical experience of the working of institutions of which I have been, directly or indirectly, the founder.

Before entering on the general consideration of the subject, I will

briefly state the circumstances which first directed my attention to the formation of Provident Dispensaries.

In the early part of my medical career, I was for a short time attached to the army; and there acquired those ideas of order and discipline, which I have since endeavoured to carry out in the duties of practical charity. Subsequently, I proceeded to establish an Eye and Ear Infirmary in my native town; and soon received such an amount of support, as to be able to calculate on an annual income of £120. This would be sufficient to pay the rent of a house, also the matron and servants; but it would not maintain the patients. The committee therefore determined that the subscribers, or parishes sending patients, should pay sixpence a-day for each child, eightpence for each woman, and tenpence for each man. Up to the present time, we have been able to keep in constant usefulness an institution, in which fourteen beds are made up; and, without any other aid, we have accumulated, from the profit on the patients' board and surplus subscriptions, nearly £500; a large sum in a neighbourhood where the number of the rich is greatly limited. From the success which attended this institution, I conceived the idea of remodelling the common method of supplying the poor with medical attendance, by the establishment of self-supporting Dispensaries; and I published a pamphlet, setting forth my views on the subject. The practical results of the plan proposed by me will be subsequently illustrated.

The necessity of remodelling the administration of our public medical charity will be obvious, from a careful examination of the working of the methods by which the poor are at present generally supplied with medical attendance. To make my remarks on this subject more intelligible, society may be divided into three classes:

1. Those who are able to pay for whatever they require.
2. Those who are willing, but unable to pay the usual charges of medical attendance.
3. Those who are utterly unable to contribute anything, and not unfrequently unwilling.

Of the first class I will merely observe, that the second has many claims on their attention: and that this feeling actuates the members of the first class, the number of charitable institutions which abound in this country is a sufficient proof. They have, however, done great injury by not making a sufficient separation, and confounding the second with the third class—those who are unwilling to pay. It is from the first class also, that medical men must expect payment for their labour: they can expect no adequate remuneration from either of the other classes.

The second class, who are willing, but unable to pay for medical advice, are very numerous. That they are willing to procure medical advice when it is brought within their reach, is proved by the fact, that in every place where the plan proposed by me has been fairly tried, they have done all that could be expected of them.

The persons belonging to this class are mostly in a condition, in which, under the present system, they must either act dishonestly, by incurring medical bills which they know they can never pay; or they must lose their independence, and descend into the ranks of beggary, by soliciting a charity ticket to some honorary Dispensary, or, still worse, by applying to the relieving officer for a parish order. Or they may take quack

medicines, or obtain medical advice from druggists. Many, again, have too much intelligence, and too great a feeling of delicacy and independence, to submit to any of these degrading alternatives, and frequently die without any assistance whatever.

The remedy proposed for these evils, is the establishment of Provident Dispensaries, to which all those who are willing, but unable to pay a bill for medical attendance, might periodically contribute a small sum, in no case exceeding one per cent. of their earnings. By this means, efficient medical aid would be secured to them in illness; and they would still be enabled to maintain a feeling of independence on charity, and at the same time have their minds relieved from that most uncomfortable incubus—a long bill.

It is evident that that can be easily done by the aggregate, which would be perfectly ruinous to an individual. One penny per week from each of one hundred persons will give an income of £21 13*s.* 4*d.* per annum; a sum fully equal to pay for medical advice of the highest class. It is probable that a hundred average adults may not have three months of confinement to bed from sickness among all of them in the year; and a few may require single doses of medicine, which will often ward off more serious attacks.

The main feature in which Provident Dispensaries differ from the generality of charitable medical institutions, consists, then, in this: that, while the Dispensary is supported by the contributions of the more opulent, each person who receives benefit from it has paid his or her share towards its funds. They have, moreover, the advantage of not being liable to the perversion of charity, which obtains to such an extent in our hospitals and dispensaries. It is a notorious fact, that many of the patients of these institutions are persons who can well afford to pay for medical attendance; and that the system of admission by recommendation from governors has often, intentionally or unintentionally on their part, the effect of utterly perverting the charitable objects which such institutions may be expected to have in view. Is it wonderful, also, that many of the poor are so, because they find it the best and only means of obtaining the attention of the rich?

There is a class of Provident Institutions in many districts, in which each member, by payment of a certain sum to the common fund, entitles himself and his family to medical attendance and pecuniary aid during illness. The management of these clubs is in the hands of those who thus derive benefit from them; and the principle of mutual charity, which, if properly regulated, they would tend to support, is often perverted by the admission of persons who, though perfectly able to pay for medical advice on their own account, have not a sufficient sense of their own dignity, or of justice towards their medical attendant, to prevent them from availing themselves of the benefit afforded by such institutions, and to which their poorer brethren have mainly contributed. Provident Dispensaries, if properly managed by a committee selected from the subscribers to the honorary fund, and by the medical men connected with them, obviate this evil, by preventing the admission of any but those for whom they are originally intended.

Plan of formation of Provident Dispensaries. The following plan is founded on the rules of the Royal Victoria Dispensary at

Northampton. It will, of course, require modification in some of its details, according to circumstances. 1. The funds of the institution are to be derived from the subscriptions and donations of honorary members, and the payments of free members. The honorary members to be governors, according to a scale of payments. 2. The honorary fund shall bear the general expenses of the institution; the free members' fund shall defray the cost of drugs; and the remainder, together with such portion of the honorary fund as may be proper, shall be proportionately divided among the medical officers. 3. The institution shall be managed by a president and committee, elected from the honorary members, in such way as shall appear desirable. 4. The medical officers shall attend daily in rotation: all legally qualified practitioners practising in the neighbourhood shall be considered, unless they decline, as medical officers. 5. The free members shall consist of working persons and servants, their wives and children, not receiving parish relief, and being unable to pay for medical advice in the usual manner. Any such person wishing to become a free member, shall leave his or her name, age, residence, and occupation, at the Dispensary, and deposit one month's subscription, which will be returned if the depositor be not admitted a member. Every free member, above fourteen years of age, shall pay one penny, and under that age one half-penny a week; but twopence a week will be considered sufficient for a man, his wife, and all his children under fourteen years of age. Servants who may be judged eligible by the committee, shall pay five shillings a year, in not less than half-yearly payments. The payments of the free members shall be made in advance. No one in arrear will be entitled to the benefits of the institution; and each family or member shall pay a fine of one penny for the arrear of every week. If any member be more than five weeks in arrear, his or her name shall be erased from the books. No one actually labouring under sickness can be admitted a free member, unless he pay an entrance fee of five shillings, in addition to the usual weekly subscription, and all his family enter at the same time. If any free member shall, through improved circumstances or otherwise, be, in the opinion of the committee, no longer eligible to the benefits of the institution, his or her name shall be erased from the books. Every free member shall have the choice of whichever medical officer he may prefer; but he shall not change his medical attendant during his illness, without the sanction of the committee. Those patients who are able must attend at the Dispensary between and o'clock in the morning, bringing their admission ticket. Those who are too ill to attend at the Dispensary, must send their ticket before nine o'clock in the morning; the medical officer by whom they wish to be attended, will visit them at their own homes. In cases of accident, or sudden illness, they can have the attendance of any one of the medical officers, on sending their admission ticket to his residence. No free member will be visited at his own home, if he reside beyond the limits of the parish. Any married woman being a free member, subscribing with her family twopence a week, may have, during her confinement, the attendance of whichever medical officer she may prefer, on depositing at the Dispensary five (or ten) shillings three months previously. The same amount will be added to the fee of the

medical officer out of the honorary fund. No woman is entitled to the benefit of this rule, unless she has been a member at least six months. Patients must find their own bottles. The children of the free members may be vaccinated on any morning, at o'clock. The medical officers will attend at the Dispensary every morning, except Sunday, in rotation.

Social Importance of Provident Dispensaries. The advantages conferred on all classes of the community by a well managed Dispensary of the class under consideration, are numerous; it will, therefore, be sufficient to call attention to a few of the most obvious.

1. As has been already pointed out, they offer material aid to those who are able and willing to maintain themselves by their own labour, but whose resources are not sufficient for the expenses incurred by illness. To such persons, they offer a ready means of obviating the alternative of either the degradation (to them) of applying for parish relief, of incurring bills for medical attendance, which they can never pay, of consulting ignorant and unqualified persons who pretend to treat diseases, or of allowing disease to obtain, unchecked, the mastery over their constitutions.

2. They tend to foster practical habits of forethought and economy. Having once perceived the advantages derivable from Provident Dispensaries, those who have received these benefits will be led to enter into combination for provision against other necessities or casualties of life, as clothing, old age, etc. Hence will arise, as has already been the case in several places, the formation of Mutual Benefit Associations for the supply of food, clothing, etc., to those who are in need. During any extraordinary epidemic visitation of sickness, also, the recipients of the benefits afforded by a Provident Dispensary, will be easily led to make some temporary provision to meet the additional wants which they may incur. As an instance of this, I may mention, that during the prevalence of cholera, in 1832, the free members of the Provident Dispensary in Southam were induced to subscribe an additional sum of sixpence per week for each family during the prevalence of the epidemic, and the proportion which was found remaining at its termination, was returned to them.

3. These Institutions also leave the patients, to a great extent, unembarrassed in their choice of a medical attendant. Confidence in the skill of the practitioner employed, is more or less essential to the successful treatment of disease: but this can hardly be expected to be the case when, as under the present system of parochial relief, the patient is required to call in the parish medical officer. Under the system of Provident Dispensaries, each free member has the power of selecting a medical attendant, and of changing the same at the end of a certain period, or often, if there be sufficient reason, at any time. It moreover enables them to easily have the combined medical skill of the Institution applied in cases of emergency.

4. Provident Dispensaries obviate the indiscriminate abuse of medical charity constantly practised in our Hospitals and Dispensaries. It is well known, that in such institutions, little or no discrimination is exercised by the governors in the granting of tickets of admission to applicants for relief: and the natural consequence is, that the benefits

of the institution are afforded to many who are well able to pay independently for medical attendance, while those who are really destitute are excluded. On this subject, I would refer the reader to the excellent pamphlet on *Sanitary Economics*, by Dr. A. P. Stewart, who has ably pointed out the evils of the present system of medical charity.[1]

5. Another benefit is, that the poor are led to apply for timely aid against the inroads of disease. I have already referred to the fact, that many of these prefer allowing disease to make progress—it may be irrestrainable—in their constitution, rather than submit to the degrading alternative at present offered to them. But the restraint thus imposed on their spirit of independence and honesty, is removed by the power of obtaining such assistance as is afforded by a Provident Dispensary: and that this is actually the case, is proved by the large proportion of applications for medical relief, made by persons labouring under latent ailments, during the first year of the opening of such institutions.

6. Provident Dispensaries will tend to diminish the expense which is incurred under the present system of poor-law relief. By enabling many to obtain medical aid without applying to the parish, they will directly diminish the burden of the poor-rates, which will thus be more especially applied to the objects for which they are properly designed. There will still be many of those who are able to provide for themselves and their families, but yet have not sufficient honest pride to keep them from falling into the ranks of pauperism. I do not anticipate a complete reform in this respect; but the system which is the subject of this paper, will tend to effect a separation between those who are embarrassed by temporary necessity, and the pauper from obstinate improvidence. And it is probable that Provident Dispensaries will be found to possess such advantages, as to lead parish authorities to contract with them for medical attendance on the paupers. By this means, many of the evils arising from the farming of the sick poor will be averted.

7. The medical profession will also derive no small share of benefit from the establishment of Provident Dispensaries. They will be spared the irksome task of sending bills for attendance to persons who cannot pay the usual fees, while, at the same time, they will receive a greater amount of remuneration for their labour, provided care be taken to admit none but the really needy to the benefits of the institution. The restraint imposed by the idea of unpaid bills, or by the fear of incurring them, being removed, the patients will be led to apply at a sufficiently early period to enable the medical man to use the proper means of treatment, with some probability of success; and the result of this may be an increased confidence in his skill on the part of his patients.

The system will, moreover, tend to bring practitioners into closer contact with each other; and, while it increases their mutual good-feeling, will afford them opportunities of obtaining that improvement in professional knowledge, which is better effected by a combination, than by the unaided labours of a single individual.

Many other advantages arising from the adoption of Provident Dis-

[1] See a review of Dr. Stewart's pamphlet in the LONDON JOURNAL OF MEDICINE for February, p. 173.

pensaries might be pointed out; but I will content myself by quoting some extracts from letters received by me from the vice-president, and from one of the surgeons of the Dispensary at Northampton, illustrating the practical working of the system in that town.

The following is an extract from the letter of H. B. Whitworth, Esq, Vice-President: it is dated 5th January, 1850. "The Northampton Dispensary was commenced under very unfavourable circumstances; but the institution has now, I think, taken a firm hold on the affections of the classes for whom it was established, which has been proved beyond all doubt within the last six months.

"About the month of August last, the cholera broke out in this place, when, at the request of a self-constituted Board of Health, and of the Improvement Commissioners, the Dispensary was thrown open to all persons labouring under cholera and diarrhœa. This proved to be very efficient, as upwards of 400 applications were made at the Dispensary, and about three times as many visits were made by the medical officers of the institution at the homes of the patients; but the most surprising result, was the increased number of applications that were made at that time to enter the Dispensary, viz., about 500 in the four consecutive weeks after the opening of the Dispensary to the public; and from that time to the present about 500 more: so that upwards of 1000 new members have entered since August last; and our receipts are now upwards of £10 per week from the poor, and our total number of members is upwards of 4000.

"In a social point of view, I consider that the working of the provident principle is doing a great good; and I doubt not but that, in a few years, the Dispensary will be considered, by all classes, as the most important public institution connected with our town.

"With my best wishes for your success, believe me, dear sir, yours sincerely, "Henry B. Whitworth."

Mr. Spurgin, one of the surgeons to the institution, writes as follows: "I am decidedly of opinion that Dispensaries, based on the principles referred to, are capable of affording incalculable benefit to our community. Considerable vigilance and care should be taken by the executive committee in the selection of objects, or it would unquestionably clash with the interests of the practitioners in the locality, and of course with that of the officers themselves. The honest man, having no other resources than his own industry, is the party to admit. A second class of persons are admitted, who would not pay at all, and in this way positive relief is afforded to the medical man; the trouble of keeping accounts, of bill delivering, of bad debts, and of sore mortification, is often and assuredly prevented, by the admission of this class. I would also refer to a third class of patients, now very generally admitted; these are domestic servants. I have given this grade much thought, and am of opinion, that where they are receiving a certain amount of wages, they ought not to be admitted. I have for many years found them quite competent and very ready to pay; I should not admit them when they are receiving over £9 or £10 a year. The introduction of this system has a great tendency to prevent the illegal and highly injurious, and frequently fatal practice of the druggist; and

I am sorry to state that I have met with many instances of mal-practice, attended with fatal consequences,—a practice, too, which I feel it my duty to prevent and expose, whenever and wherever it may come fairly before me. Of course, for similar reasons, the administration of quack medicine may be prevented. With regard to our own Dispensary, I believe it is becoming more and more appreciated, as proved, not only by the great and rapid increase of members, but also by the expressions of gratitude with which we, as its medical officers, are frequently meeting. Yours very faithfully, B. Spurgin."

With these testimonies in favour of the system I advocate, I conclude. If the remarks I have here made, in any way tend to the more extended adoption of the plan in behalf of which I have so long laboured, and which I am convinced is fraught with great benefit, both in the avoidance of evil, and in the conferring of positive advantage on all classes of the community, I shall receive a great reward.

Southam, Warwickshire,
March 1850.

CHARING CROSS
HOSPITAL
STUDENTS' LIBRARY

BIBLIOGRAPHICAL RECORD.

Observations on some of the Parts of Surgical Practice. By John P. Vincent, late Senior-Surgeon to St. Bartholomew's Hospital. pp. 364. London, 1847.

Few surgeons have enjoyed greater opportunities for observation than the gentleman who, for so many years, filled the responsible office of senior-surgeon to our largest metropolitan hospital; few can have discharged the onerous duties which devolved upon them with greater advantage to their patients, or greater credit to the establishment; and, we may further take upon ourselves to say, that none can have carried with them, on their retirement from public life, more general respect, or more richly deserved esteem, than the author of the volume before us. Years have elapsed since we had the advantage of reaping the benefit of his instruction, but we cannot forget that the principles of practice, laid down by Mr. Vincent, have been of essential service to us in our subsequent career; nor that the kindness of manner and gentlemanly feeling displayed by him on all occasions, exercised a beneficial influence on the habits, and softened the manners of the students who attended his wards. The volume before us contains the principles of his practice, matured by experience and improved by reflection; as such, it has pretensions of no ordinary character.

The first chapter is devoted to the consideration of the Claims of Surgery to be classed as a Science. It is ably written, and proves that Mr. Vincent has thought much and read much on other subjects than the mere practice of his profession. As we propose to devote such space as is at our command, to the essential features of the volume, we must content ourselves with this passing remark on the chapter in question. Before proceeding further, we must express our regret at the promiscuous manner in which the subjects are mingled together without any plan or connection; there are neither tables of contents nor marginal references; hence the reader is perplexed in his search, and has to turn to the index to discover any particular subject. In the next edition we trust, that this want of order, which is a blemish on the book, will be rectified.

As a preliminary to an exposition of his views on the treatment of diseases, Mr. Vincent offers some valuable observations on muscular action, and on the conservative powers of nature; pointing out the immense importance of a just comprehension of these, in reference to the management of fractures and dislocations, and the healing of wounds. It is well remarked that "surgeons have puzzled their brains as to the best means of keeping the parts of a wound of the tongue together, whether by stitches, &c. The fact is, all meddling does harm. If the patient will keep the tongue quiet at the bottom of his mouth, the wound will heal, as I have seen, better than anything his busy hand can do to effect it." (p. 18.) To many other injuries does the same judicious principle apply. The *vis medicatrix naturæ* is often far better than the officious interference of what is sometimes miscalled medical 'aid'. A good test of a sound practitioner is to know when to hold his hand, and, in the language of Dr. Johnson, not 'to encumber with his help'.

Mr. Vincent lays great stress, and justly, on the assistance rendered by the muscles in the Reduction of Dislocations—it is they, not the surgeon, which complete the act of reduction; his efforts are limited to drawing the bone so near the socket, as to bring the muscles into a situation to resume that association, in which all their actions have been accustomed to take place; they do the rest, and it is the absence of their assistance which materially increases the difficulty of reducing dislocations of long standing. The consentaneity of action between the muscles having been broken up, new associa-

tions are formed under new conditions, and they are no longer eager, as it were, to resume their pristine condition of action, and cease to render valuable aid to the operator. Thus it is by appropriate and judicious manipulation, not by force, that old luxations are to be reduced. Mr. Vincent places no reliance on bleeding, tartar emetic, or the warm bath, as auxiliaries in these cases—such expedients he regards as quite nugatory.

The most common fracture of the scapula, is that of the inferior angle and part of the spine of that bone. These injuries are exceedingly painful at first, but require no bandages—simply recumbency in bed. In fractures of the acromion, also, repose in bed, with the arm to the side, is all that is recommended.

Mr. Vincent has not seen a recent case of luxation of the head of the radius backwards, but from the old cases of this accident which have come under his notice, he is of opinion, that the injury is apt to be overlooked; he, therefore, advises all surgeons to be most scrutinizing in examining injuries of the elbow-joint, lest this derangement should escape detection. Cases of fracture of the olecranon, which occur about the middle of the semilunar notch, are treated by perfect extension, which leaves no inequality in the union of the parts, and does not subsequently deteriorate the arm at all. Another injury, when the fracture takes place just at the root of the coronoid process, is accompanied with more pain, and leaves more imperfection than the former. On fractures of the fore-arm, two observations are made. One is, that the author has seen the greatest mischief arise from using bandages in this injury, the broken parts of the two bones having been pressed together and so united, that the limb has been made almost useless. He recommends two splints simply, care being taken that the thumb be kept quite vertical to the little finger. The other observation is, that the want of power in the hand, and the pain which often attends oblique fracture of the lower end of the radius, are attributable to bandaging. If pressure be made use of, it is on that part of the radius where both the flexor and extensor tendons pass in grooves in the lower end of the bone. They become involved in the inflammation and effusion of lymph consequent to the injury, and are thus rendered useless.

Simple as the operation may appear, the reduction of dislocation of the phalanges of the fingers and toes is often attended with vexatious difficulty, if the true principles of action are not understood. They are as follows: "If the lateral ligaments are entire, the phalanx that is dislocated lies over and parallel to the other, and the lateral ligaments are now at right angles instead of being in the same line as the bones; and, therefore, by the laws established in the resolution of forces, any power to draw the bone in the line of its axis, must only press the bones more closely together. The phalanx must be first drawn at right angles over the upper bone, and then pressed laterally, so that the end may be placed over the fixed bone, and then turned upon this point into its place. This first cross position must sometimes be made in the direction contrary to that of placing it over the end of the other, and then brought into the straight line .... Some years ago, a patient was brought into the hospital with a luxation of the first phalanx of the second toe, upon the metatarsal bone; a very long and powerful extension had been made, and without any impression upon the displaced bone; I bent this phalanx at right angles to the other bone, and with one finger pressed the projecting end downwards, and then made the other end revolve so as to make a straight line with the fixed bone. Thus, without any pain and with the utmost facility, the reduction was effected." (p. 40.)

Fractures.—When more than one rib has been fractured, Mr. Vincent regards the injury as of importance, and, from his experience, anticipates a fatal termination when several are broken; but he does not regard the occurrence of emphysema, *per se*, so grave a complication as is commonly supposed. Frac-

tures of the vertebræ are not alluded to, which we are rather surprised at, considering the importance of injuries about the spine. A very singular accident deprived us of a near relative some years ago: whilst out shooting, he leapt from a high bank into a rough ditch, and slipping, struck his back with much force against the stump of a tree. From that time until his death, about four months after, he suffered constantly from pain in the loins, bloody urine, etc.; and *post-mortem* examination showed that a splinter had been struck off the transverse process of one of the vertebræ. and had penetrated the left kidney, there setting up such morbid action, that the kidney was reduced to a mere bag of pus.

In the treatment of the fractures of the femur, Mr. Vincent prefers the position on the side, where the bone is broken just below the trochanter minor, or in the middle of the shaft; but the straight position is adopted when the fracture is just above the condyle. To the inclined plane and the long straight splint, he has decided objection.

A troublesome accident, both for patient and surgeon, is dislocation of the semilunar cartilages of the knee; the case of course being marked by the joint becoming locked on some sudden motion. The true way of manipulating here, is to place the patient on the affected side, with the limb bent; and then to rotate gently the tibia on its axis. This seldom fails to replace the luxated cartilage.

In the treatment of fractures of the leg, Mr. Vincent employs the least possible amount of apparatus, and allows most of his patients to get about a little in three weeks; crutches he discards, for the patient has first to learn the art of using them, and then he has still to learn the art of walking alone. A case recently came under our notice, in which a lady had been placed on crutches by an empiric, for a really trifling affection of the ankle. For eighteen months, she had used them without the least necessity on earth: her figure had been completely spoiled; the leg had diminished in size nearly one half for want of use; and no infant could have been more clumsy or helpless, in its efforts to walk, than this poor lady without her crutches. We fear that they are often recommended without a thought being bestowed on the evils to which they give rise.

There are certain cases in which experience teaches us, that it is better to trust to the *vis naturæ*, than to be poking and meddling with instruments. A child is brought with an ear of barley thrust up its nostril, or a bit of potatoe in the ventricle of the glottis; use instruments, and the chances are a hundred to one that you set up an immense amount of irritation and fail to remove the foreign body; let it alone, it will become covered with thick mucus, and soon come quietly away.

In the treatment of Carbuncle, Mr. Vincent justly observes, that the first object which should be held in view, is to soothe and tranquillize, by the employment of salines and sedatives. The chief derangement which we have to combat, is an irritable excited state of system which has to be subdued. He recommends only the most soothing applications to the wound, and is of opinion that, in almost all cases, the sufferers are drinkers. According to our experience, there are many exceptions to this rule. One of the most formidable cases which have fallen under our notice, occurred last autumn, in the practice of an eminent surgeon, Mr. Poyser of Wirksworth. The patient was a lady of delicate frame and exceedingly abstemious habits, but tormented by dyspepsia. She had two carbuncles formed at the same time; one of immense size on the right scapula, the other on the sternum. The treatment adopted was that of bold incisions: dressing of tincture of tolu, effervescing salines with tonics, and when she could bear it, liberal diet; which practice was attended with the happiest results. We have seen her within the last few days, and find that she is still subject to boils, and is sadly tormented by intense itching in the cicatrices of the incisions: a troublesome but not uncommon sequence. The carbonate of manganese has been tried in her case with advantage.

Fistulæ. In a previous number we had occasion to advert to the opinions of Sir B. Brodie and Mr. Syme, on the formation of fistulæ. Mr. Vincent has had many opportunities of seeing the abscesses which, in his opinion, give rise to fistulæ in ano. When he feels a deep-seated doughy tumour in the mass of fat, filling up the ischio-coccygeal space, he transfixes it at once, and in the very centre of the mass a little pus is found ; this prompt measure stops all further progress of the abscess, which would, otherwise, most probably find its way to the rectum, and terminate in fistula. The opening in the rectum can generally be detected by a small papillary growth projected into the canal. There are several valuable observations on the formations of matter that occur in the perinæal region, but for them we must refer to the work itself.

In the treatment of Piles, Mr. Vincent advises the puncturing external piles, and lays great and just stress on squeezing out the coagula, by which bleeding is prevented. Internal piles he also excises, and considers that there is no fear of hæmorrhage if two simple measures be adopted—namely, making use of an injection of sulphate of iron, one grain to an ounce of water, and carefully squeezing out the coagulum. This we should recommend to the consideration of our readers, from actual experience of its value, not only in arresting hæmorrhoidal bleeding, but also in prolapse of the bowel.

The experience of Mr. Vincent in the management of Diseases of the Urinary Organs, has been extensive, and his opinions, therefore, are deserving of respect. In the treatment of strictures, the gentlest means are advocated, but the practice is decided when there is any appearance of effusion of urine. When there is any hardness felt, indicating the barrier of lymph thrown out against the extension of the effusing urine, a scalpel is to be plunged at once into the tumour, and a free opening made, and thus is afforded the best prospect for the speedy healing of the parts. No catheters are to be kept in the passage, but the whole treatment should be directed to soothing the structures, the patient being kept in bed and his general health carefully attended to. The prostate gland is, in the author's opinion, more frequently the subject of derangement than is commonly imagined, being generally somewhat inflamed even in cases of slight gonorrhœa. The remarks on the use of the catheter are full of good sense, but our space will not permit us to do more than direct attention to them. Mr. Vincent remarks, that cases of stricture, with complete obstruction, seem to have been more common formerly than now, and that he has many times punctured the bladder above the pubes with the happiest effect. There has never been any infiltration of urine of any consequence, and the wound has healed kindly. It is preferable to cutting into the membranous portion of the urethra, which, in the author's opinion, is far more difficult and much less successful.

On one point we venture to differ in opinion with Mr. Vincent, and that is, as to the treatment of Strumous Ophthalmia. The treatment here recommended, when there is intense intolerance of light, is to give the child three or four grains of hydrargyrum cum cretâ, twice a day for about a fortnight. In our experience, such a quantity of a mercurial preparation is hazardous, and likely to produce constitutional effects which are not required. A few doses of hydrargyrum cum cretâ are most useful to correct the secretions ; but when that is accomplished, tonics, sedatives, and the iodide of potassium, combined with judicious counter-irritation, attain the object speedily and with more safety than a course of hydrargyrum cum cretâ, or any other mercurial.

The work is so pregnant with valuable matter, that almost every page may be consulted with advantage. The limits of a review will only admit of a selection of the more striking and salient points. These we have touched upon, and feel confident, after a third perusal, that the old practitioner and the young student may alike glean sound and useful information from the ripe experience and well-matured judgment displayed, in this admirable and most practical volume.

Annals of Anatomy and Physiology. No. I. Conducted by John Goodsir, F.R.SS. L. and E., Professor of Anatomy in the University of Edinburgh. pp. 95. Edinburgh: 1850.

We welcome this new scion of periodical literature with cordiality, from the respect we bear to Professor Goodsir, whose well-earned and solid reputation has added a wreath to the laurels of the University of Edinburgh. The work has nothing provincial in its appearance, but, on the contrary, is extremely well got up as regards paper, printing, and illustrations. It bears upon the wrapper (which is similar in colour to our own) a mystic symbol—a sweep resembling the form of the shell of Nautilus Pompilius—the meaning of which we do not understand.

The following are the titles of the original articles:—A description of the Muscular Structure of the Tongue of Man, and certain of the Mammalia, by Mr. Zaglas. II. On the Anatomy of Forbesia, by Mr. H. D. Goodsir. III. An account of some Monstrosities, by the late Dr. John Reid. IV. On the Structure of the Glands of the Alimentary Canal, by Dr. Allen Thomson. V. Note on the Refracting Power of the Eye, by Professor J. D. Forbes. VI. On the Structure of the Spleen, by Dr. Sanders. Thus we have specimens of Anatomy, Physiology, Comparative Anatomy, and Natural Philosophy, which we presume shadow forth the subjects to which the journal will be devoted—subjects affording the most ample scope for investigation and elucidation. Under the fostering care of so accomplished an editor, the work deserves, and we trust will obtain, much success. There are no extracts given from other works: but there is furnished a very useful Bibliography, containing the "titles of Memoirs, and Papers in Transactions and Periodicals, and of special Treatises on Anatomy and Physiology". The *Annals* are to appear quarterly.

Instructions for Making Unfermented Bread: with Observations on its Properties, Medicinal and Economic. By a Physician. Sixteenth edition, with Additions. London: 1849.

In our number for February, p. 191, we copied an article from the *Medical Gazette*, on arsenic being present in Unfermented Bread made with an impure acid. In the *Instructions for Making Unfermented Bread* now before us, and to which allusion is made in the article in question, we find the following passage at p. 24, sixteenth edition: "The acid recommended is the muriatic of commerce, as prepared for the London market. When the sulphur used in the preliminary process is obtained from iron pyrites, as it is in several of the manufactories in the northern counties, the acid is impure, and therefore unfit, till purified, for making bread." And again, at p. 27, "the wholesale price of the soda in London, at the present time, is 17*s.* per cwt., and of the acid, 8*s.* per cwt.; and they may be obtained at these rates, and of the qualities required, from the manufacturers, Messrs. C. Tennant, Sons, and Co., 101, Upper Thames-street. The baker who supplies the author's family obtains soda at 3*d.* per lb., and acid at 2*d.* per lb., in moderate quantities, of Mr. Bainbridge, 60, Leather-lane, Holborn." We may add, that the proper acid may be procured in like manner from the manufacturers, Messrs. White, Castle-street, Saffron-hill, or from Mr. Wicstead, Battersea, or, as we believe, from any of the other London makers—certainly from all who make the article for medicinal purposes. There can therefore be no difficulty in securing a supply of the right material, either in large or in small quantities, and no excuse for substituting an inferior, still less a noxious, preparation; but we concur with the *Gazette* writer in thinking, that the sale of the poisoned acid should be altogether prohibited.

With reference to the superiority of Unfermented Bread, which has been called in question by the writer in the *Gazette*, we avail ourselves of another quotation from the *instructions* before referred to. "Bread so made (p. 11)

contains nothing but flour or meal, culinary salt, and water. It has an agreeable natural taste, keeps much longer than common bread, is more digestible, and much less disposed to generate acid. Common bread, like everything that has been partially fermented, ferments easily again, to the great discomfort of many stomachs ; and not only so, but, by acting as a *ferment*, it communicates a similar action to the food in contact with it, when the digestive power is too weak to control or counteract the operation of the chemical affinities, as 'a little leaven leavens the whole lump.' Unfermented Bread, being free from this defect, is beneficial to those who suffer from headache, acidity, flatulence, eructations, a sense of sinking at the pit of the stomach, distension or pain after meals, and to all who are subject to gout or gravel."

We have heard the truth of much of this statement confirmed, by those who have had long experience in the use of Unfermented Bread. We have met with dyspeptics who had been obliged to abandon common bread entirely, and to substitute biscuits ; but who are able to make use of Unfermented Bread, not only without inconvenience, but with great comfort in feeling and improvement in health. The quotation just given furnishes the explanation. Common bread ferments in the stomachs of the weak, which the other and biscuits do not. For a similar reason, Unfermented Bread is often very salutary in cases of irritable and relaxed bowels. The brown variety of this bread, it is well known, has cured multitudes of habitual constipation.

We strongly recommend this little pamphlet to the attention of our readers. It is an important contribution to the science of dietetics. Chalmers has well said :—"Philosophy is never more usefully and more honourably directed, than when multiplying the stores of human comfort and subsistence."

Hastings Considered as a Resort for Invalids : with Tables illustrative of its Temperature, Salubrity, and the General Character of the Climate, showing its suitability in Pulmonary and other Diseases. By James Mackness, M.D. Second Edition. pp. 187. London : 1850.

We have found this work of Dr. Mackness, written though it be for popular rather than professional perusal, full of most valuable and interesting information. Hastings is one of those home resorts for invalids which, in hygienic advantages, far excel many of the more famous places in foreign parts, whither it has become too much the fashion to transport pulmonary and other invalids. Physicians, who wish to know the advantages of Hastings as a resort for the sick, will find everything pertaining to the subject fully treated of in the work before us.

Essays on the Puerperal Fever ; and other Diseases Peculiar to Women : selected from the writings of British authors previous to the close of the eighteenth century. Edited by Fleetwood Churchill, M.D. Printed for the Sydenham Society. pp. 552. London : 1849.

This is a valuable volume ; it contains the following works : I. Historical sketch of the Epidemics of Puerperal Fever. By the Editor. II. Reprints of works on the same subject : by—1, Thomas Denman ; 2, Nathaniel Hulme ; 3, John Leake ; 4, Charles White ; 5, Thomas Kirkland ; 6, Butler ; 7, Joseph Clarke ; 8, John Clarke ; and 9, A. Gordon. III. Miscellaneous Essays. 1, Fothergill on Management proper at the cessation of the Menses ; 2, Dr. Macbryde's cases of Tumefaction of the Labium after Delivery ; 3, Dr. John Clarke on Cauliflower Excrescence of the Uterus ; 4, Dr. John Clarke's two cases of Tumour of the Uterus ; 5, Dr. Denman's Account of an Excrescence from the Womb. The usefulness of the volume is much enhanced by a copious index.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

GRISOLLE ON THE RECIPROCAL INFLUENCE OF PREGNANCY AND PHTHISIS.

The following is a translation of an article by Dr. A. Grisolle, physician to the Hospital of Saint Anthony, in Paris, published in the *Archives Générales de Médecine* for January 1850.

It is generally admitted, that if Pregnancy occur in a phthisical patient, the progress of the Consumption is retarded; but that, after delivery, the organic lesion proceeds more rapidly, and death more speedily ensues. This doctrine reckons among its advocates, Bordeu, Cullen, Joseph Frank, Portal, Baumes, and other authorities of note. The question has received various solutions in our own time. If Bayle and Laennec said nothing about it, most authors have admitted the common opinion. M. Andral, in the first edition of his *Clinical Medicine*, considered, from the observation of nine cases, that Pregnancy did not influence the progress of Phthisis in the manner generally supposed; but, in the following editions, having observed a larger number of cases of a contrary nature, he has adopted the opinion, that the symptoms of Phthisis are suspended, or at least remain stationary, during the course of pregnancy.

When M. Louis, in 1843, published the second edition of his *Récherches sur la Phthisie*, he did not possess the documents necessary for the solution of the problem: but in referring to the single instance which he had observed, and which was contrary to the generally received opinion, he makes an appeal to the zeal of physicians, to settle a question of so great importance. More recently (1847) Drs. Hervieux and Robert (of Strasbourg), have published in the *Union Médicale* the histories of two cases which, like that of M. Louis, show that Pregnancy exerts no modifying effect on *(ne modifie point)* the progress of Phthisis; but these few and isolated facts might be considered as exceptional, and have not changed the generally spread opinion.

Having been fortunate enough, during several years, to collect from several hospitals, and especially from that of S. Antoine, the histories of seventeen cases of pulmonary Phthisis developed during Pregnancy; being indebted also to the friendship of M. Louis, for the communication of ten other unpublished cases, I have thought myself in a position to elucidate, if not to entirely solve, the difficult question which I have proposed to consider.

Consumption did not appear in all the cases under the same conditions. In twenty-four, the organic disease commenced during Pregnancy, at a period more or less near its commencement; while in three, the rational signs of tubercle already existed, but the disease did not manifest itself till a later period. In none of these cases was the pulmonary affection retarded; on the contrary, it made rapid progress.[1]

It would be important to have a large number of equally well-marked cases; but they are rare. When, indeed, we reflect on the profound influence which pulmonary tubercles exert on the constitution, as well as the uterine

[1] In a foot-note appended to the termination of his paper, M. Grisolle states, that he has met with three additional cases of the development of Phthisis during Pregnancy. In two females, the disease progressed rapidly, and had arrived at its third stage at the time of delivery. In two cases, delivery took place at the full term; and in one, at the end of the eighth month. One of the females gave birth to a strong child, which she suckled for two months, and which grew as well as an infant placed in better conditions. This anomaly may be explained by the slow progress of the tuberculous affection, and by the perfect integrity of the digestive functions.

disorders which so generally supervene at an advanced period of the disease, we can understand why conception should be rare in phthisical women. In almost all the cases in which Phthisis coexists with Pregnancy, it is found that the latter has occurred first, and that it is in a more or less advanced period of its course, that pulmonary tubercles have suddenly manifested their presence. These facts are very important, as showing that there is really no antagonism between Pregnancy and Phthisis ; but the subsequent progress of the affection proves also, that gestation has neither modified the symptoms, nor exercised any tardative effect on the pulmonary lesion. In fact, the symptoms of tuberculization, whether local or general, are developed in the same order, and with the same regularity and constancy, in women who have become phthisical during Pregnancy, as in those who have contracted the disease under ordinary circumstances. On the other hand, Pregnancy has not increased the violence or frequency of certain accidental symptoms of Phthisis. It might be thought, for instance, that the abdominal distension would render the dyspnœa more painful, and hæmoptysis more frequent; but it is found that the bronchial hæmorrhage, far from being more common, is even somewhat less frequent in the females of whom I speak, than in the phthisical patients, aged from 19 to 40 years, whose cases have been analysed by M. Louis. The progress of the disease has then progressively increased in all the cases ; and its total duration has been diminished rather than augmented. Thus, in all, the disease has terminated at from the eighth to the fifteenth month from the commencement of the symptoms ; its mean duration has been nine and a half months, which is lower than in an equal number of non-pregnant females of a similar age. But what is still more conclusive, this average of duration is lower than that which M. Bayle, and especially MM. Louis and Andral, have laid down as the mean period for the working class.

We are hence led to conclude, that Pregnancy cannot exercise that tardative power on the progress of Phthisis, which is attributed to it. Instead of tending to prolong life, Pregnancy hastens the progress of the organic lesion ; and, indeed, we cannot understand how it should be otherwise, for the system, weakened by diarrhœa, by nocturnal sweats, and by expectoration, and incessantly undermined by hectic fever, is not in a condition to support two lives. Various accidental symptoms also, often occurring in the course of Pregnancy, and increasing the sufferings of the patient, oppose a further obstacle to nutrition, and must hence favour the progress of Phthisis. It is scarcely correct to say, with the physicians whose doctrines I oppose, that during Pregnancy all the organic activity is concentrated on the uterus, and that this organ prevents or retards disease in all the others. It is difficult to understand, how this opinion has been so generally entertained. We could easily understand it, if Pregnancy, without influencing the foundation and the progress of the disease, only rendered some of its principal symptoms less evident or more obscure ; but this is by no means the case ; and, whether we consider the local disturbances, and the phenomena furnished by the different methods of exploration, or study the general and sympathetic symptoms, it is impossible to discover any essential difference between the Phthisis of pregnant and non-pregnant women. The facts which I have analysed have been so similar and constant in their occurrence, that it is rational to consider the results furnished by them, as evidences of the correctness of my observations.

We have now to inquire whether, as is generally asserted, accouchement and the puerperal state accelerate tuberculization, and render the approach of death more speedy. I think that here, also, the exceptions have been taken as the rule. Without doubt, a latent Phthisis may suddenly become active, or a well-marked case of the disease may proceed more rapidly after delivery ; but the same fact is often observed in convalescence from various diseases, or on the occasion of certain organic changes or disturbances. If we see some phthisical females die a few days or a few weeks after delivery, either at the

full time, or premature, it no less happens in those who, having arrived at the extreme limits of the last stage, worn out by hectic fever, by sweats, and by diarrhœa, die, as if exhausted by the last effort of nature to expel the fœtus. But, I repeat, such cases are rare. Thus, twelve females, some of whom, at the time of delivery, were in the second, and most in the third stage of Phthisis, have continued to struggle, on an average, four months, against the progress of Consumption ; and in all, the symptoms have been those observed in ordinary cases. In three, out of ten phthisical females, who were only in the first, or at the commencement of the second stage, the progress of the disease after delivery was slow ; two only manifested a notable aggravation ; while five, or one half, shewed in the general symptoms, and one even in the local symptoms, a sensible amelioration, so as to be able to leave the hospital, and resume their occupations. I must, however, add, that this amelioration was not sufficient to allow a hope of cure, or of the suspension of the disease for any length of time. It then results, that delivery and the puerperal state have not that influence on the progress of Phthisis, which is generally attributed to them ; that, most commonly, tuberculization goes on as before, till death ensues ; while sometimes, when the disease is less intense, it is more or less perfectly arrested.

It may now be interesting to inquire whether Phthisis, in its turn, does not modify Pregnancy, and produce certain important effects on the act of labour, on the sequelæ of delivery, and on the nutrition of the fœtus. It is incontestable, that phthisical females have less chance of bringing their Pregnancy to a successful termination than those who are in health : but it is worthy of remark, that the former have not that tendency to abortion which we would expect. Thus, out of twenty-two females who were carefully watched, three only aborted at the fourth and sixth months ; three others were prematurely delivered at the eighth month ; while all the rest went to the full term. In almost two-thirds of these latter, however, tuberculization had set in during the early months of gestation, and had induced extreme cachexia. In this point, there is a great difference between Phthisis and acute pulmonary diseases. In 1841,[1] I pointed out that pneumonia, in pregnant females, provoked abortion or premature labour in more than half the cases in which it occurred. The facts which I have since observed have confirmed these results. This difference between an acute and chronic affection, is naturally explained by the great constitutional disturbance produced by the suddenness and violence of the attack of pneumonia, while Phthisis is slow in its development, so that the system seems to become accustomed to it, and is not so readily affected as by the sudden invasion of an acute disease.

The females to whom I have referred, suffered very slightly from labour pains in their delivery. Excepting one, who was in pain for twenty-four hours, all the rest, even primiparæ, expelled the fœtus after three or four hours of very moderate suffering. The shortness of the labours may be generally explained by the smaller size of the child, but perhaps better by the diminished resistance offered by the weakened tissues to their distension. The children were, indeed, often weak and meagre ; but in more than a fourth of the cases, they were strong, their tissues were firm, their forms round, and their plumpness presented a striking contrast to the phthisical appearance of the mother. There is nothing very extraordinary in the fact, that women who have suffered severely during Pregnancy, and have been almost constantly harassed with vomiting, are sometimes, notwithstanding their enfeebled state, delivered of well-formed, and even strong children. But when the same thing occurs in females whose constitution has not been impaired by functional disturbances, but by one of those organic lesions which are the expressions of a diathesis, and which produce a most profound alteration of the nutritive function ; when we see a fœtus live, and become normally developed in a body which is in a state of decay, and whose powers are irrecoverably

[1] Traité de la Pneumonie, p. 480.

diminishing day by day, I confess that we have here one of those preservative acts of nature, which we must admire without pretending to explain.

With the exception of a few patients who were in the last stage of Phthisis, and who died a few days or weeks after delivery, the lacteal secretion was established in sufficient quantity in almost all the cases. But one or two weeks, or a month at most, had scarcely elapsed, before the flow of milk was considerably diminished, and even entirely suppressed. For however short a time lactation was prolonged beyond this, it had always the effect of sensibly aggravating the Phthisis. This depended not only on the expenditure of nutritive material through the milk, but also on the additional fatigues to which women are exposed during lactation. This disastrous result is the less surprising, when we sometimes see the same causes induce pulmonary Phthisis in women who previously appeared healthy.

Suckling has also been very injurious to the children. The milk, being entirely serous, and deprived of nutritious matter, has soon excited copious diarrhœa; and the little patients, if not placed under the care of a nurse, have died in a few days with ramollissement of the intestinal mucous membrane. No tubercles have been found in any part of their body; and yet, how can we find circumstances more favourable to the development of these morbid products? These children, in fact, had lived in the uteri of females in the various stages of pulmonary Consumption, and, after their birth, had been furnished with insufficient, and probably deleterious aliment—a double reason for the production of tubercles. Their absence, in these cases, arises from the infrequency of tubercles in the lungs before the first dentition. Those who have maintained a contrary opinion, have mistaken the hepatisation from a subacute pneumonia for tuberculization: but an attentive examination by the naked eye and by the microscope, have shewn me that there is nothing common to these two states. These negative results of autopsies also demonstrate that the child, when born, seldom or never has the material germs of the malady, or miliary granulation, but only a special organic disposition, and an aptitude for their production in the lungs at a more or less distant period.

Such are the principal results at which I have arrived. We must conclude that it is rare for conception to take place in women labouring under confirmed Phthisis; while, in a pretty considerable proportion of cases, the first symptoms of pulmonary tuberculization occur during Pregnancy, and especially in the first three or four months. Unfavourable hygienic conditions, mental affliction, and misery, may appear sometimes to explain the development of the organic disease; but it is certain that, in most of these cases, Pregnancy was the only change in the condition of the females which could be supposed to act as a determining cause. But Pregnancy has not produced the disease; it has only put the predisposition in an active state, just as any other physiological or pathological change would act. Pregnancy and Phthisis, having had a nearly simultaneous origin, have proceeded without appearing to influence each other: but I have proved, from a comparison of other facts, that the Phthisis was rendered rather more rapid than in the non-pregnant state. The unfavourable influence of Pregnancy is also proved by the fact, that after delivery, provided always that the disease had not reached a too advanced stage, the organic disease is observed to be mitigated, or at least to remain stationary. On the other hand, pulmonary tuberculization does not modify, at least in a great majority of cases, the progress of Pregnancy. This point has been already perfectly established by Desormeaux and Paul Dubois.[1]

Such are the principal conclusions at which I have arrived. I do not offer them as absolutely correct; for they must be supported by more extended observation. The uniform results, however, which my observations have furnished, under whatever aspect we view them, must lead us to hope that they will be confirmed by subsequent investigations.

---

[1] Dictionnaire de Médecine. Art. GROSSESSE, t. xvi, p. 389.

BELLADONNA IN HOOPING-COUGH, EPILEPSY, AND OTHER NERVOUS OR SPASMODIC AFFECTIONS.

M. Debreyne has been in the habit of prescribing Belladonna in affections of the nervous system since 1815. The following extract from a communication, made by him to the *Journal des Connaissances Médico-Chirurgicales*, contains some observations on the employment of this medicine in Hooping-Cough, Epilepsy, Hysteria, and other diseases in which the nervous element predominates.

Hooping-cough. Belladonna has been eminently useful in the epidemics of Hooping-Cough, which M. Debreyne has observed ; but the success attending its administration depends on the observance of the following rules. The dose of Belladonna should be proportioned to the number of months representing the child's age ; and the quantity to be taken in twelve days, (the ordinary duration of treatment) will be five centigrammes ($\frac{3}{4}$ of an English grain) multiplied by the number of months. Thus, for an infant six months old, the dose will be thirty centigrammes ($4\frac{1}{2}$ grains) in twelve days ; for one of two years and a half, the dose will be $1\frac{1}{2}$ gramme (23 grains) in the same period. For children above six years of age, the quantity of three grammes ($46\frac{1}{2}$ grains) is not exceeded. The medicine is always given three times in the day. For instance, the prescription for a child three years old would be—powder of the root of Belladonna, two grammes ; to be divided equally into twelve powders, of which one is to be given daily, in three divided doses. If there be vomiting, it should be given immediately after a fit of vomiting and coughing. Recourse should not be had to this remedy, until the inflammatory element has been overcome by leeches, emetics, etc. ; in other words, it is not to be employed before the tenth or fifteenth day, when the Cough will have assumed its specific character.

Epilepsy. M. Debreyne has found Belladonna most useful in those cases of Epilepsy, in which the attacks occur frequently, and even daily. In young subjects, it is not rare to find them affected with worms at the same time ; and M. Debreyne even supposes that this coincidence is constant, the worms being either a cause or a complication of the epileptic convulsions. Hence, he combines vermifuge medicines with Belladonna, with the effect of generally producing a rapid alleviation of the symptoms. In Epilepsy, the dose for the first day should be ten centigrammes ($1\frac{1}{2}$ grains) of aqueous extract of Belladonna ; five centigrammes morning and evening : on the second and third days, five centigrammes, morning, noon, and evening ; and on the remaining days, ten centigrammes are to be taken morning and evening. M. Debreyne refers to patients who have thus taken sixty-five centigrammes (10 grains) of the extract, in twenty-four hours, without experiencing the least inconvenience. In all cases, the use of the remedy must be continued for some time. An epileptic patient, aged 48 years, took twenty centigrammes of extract of Belladonna daily, during *twenty months*, with the effect only of diminishing the duration of the attacks : the treatment was persisted in, and they gradually became less frequent, and at last completely ceased. In a little girl, aged eight years, the attacks began to become less frequent on the fourth day of the treatment ; and at the end of a month, the patient was cured. As a precautionary measure, however, she continued to take five centigrammes of extract of Belladonna daily, during two months.

Hysteria. This affection receives marked benefit from Belladonna. The following is M. Debreyne's formula : camphor, twelve grammes ; assafœtida, twelve grammes ; extract of Belladonna, four grammes ; aqueous extract of opium, one gramme ; syrup of gum, a sufficient quantity to make 120 pills. One pill is to be given the first day, two on the second, and the dose is to be gradually increased to six pills in twenty-four hours.

Neuralgia. M. Debreyne relates several cases of the successful employment of Belladonna in this affection. One patient had suffered during seven or

eight years from very severe neuralgic pains in all parts of the head. All the usual remedies had been tried without effect ; a pommade of Belladonna was applied, which produced marked relief on the first day, and cured the patient in a month. Another case was one, in which daily paroxysms of frontal Neuralgia had obstinately continued for eleven years. The Belladonna pommade was applied : the pain suddenly ceased, and had not re-appeared two months after the employment of the remedy. The pommade which M. Debreyne uses is highly charged with the active principle. It consists of extract of Belladonna, lard, of each 12 grammes ; opium 2 grammes ; to be mixed accurately. It is rubbed over the seat of pain, especially during the exacerbations, or three times a day. On each occasion, a piece of the size of a hazel-nut is to be rubbed in for five or six minutes, until it is perfectly absorbed : this may be furthered by adding a little saliva from time to time.

Affections of the Eye. M. Debreyne has successfully used the pommade above described, in nyctalopia ; and in such cases, as well as in all affections of the eye requiring the use of Belladonna, he also prescribes the extract in the form of collyrium (two grammes of the extract to 125 grammes of rose-water.)

In asthma, convulsive spasmodic cough, hiccough, constriction of the œsophagus, of the larynx, of the neck of the bladder or uterus, in paraphimosis, in strangulated hernia, etc., M. Debreyne has seen benefit derived from the use of Belladonna. In nervous cough, he has given a pill of five centigrammes of extract of Belladonna, morning and evening, In spasmodic constriction of the orifice, in paraphimosis, and in strangulated hernia, he uses extract of Belladonna in the proportion of from 4 to 15 grammes to 15 grammes of Galen's cerate. The following is the formula of pills for internal use, which is most commonly employed by him in the above mentioned diseases : Extract of Belladonna, 8 grammes ; powder of gum acacia, 2 grammes ; with a sufficient quantity of some inert powder to form 120 pills, which are to be taken as directed for the anti-hysteric pills, up to 30 centigrammes of the extract in the day, provided that the patient experience no remarkable disturbance of vision. If this occur, the dose is diminished, or entirely suspended, to be resumed after the interval of a few days. [*Journal de Médecine et de Chirurgie Pratiques*, February 1850].

GRANULAR CORPUSCLES IN THE ENCEPHALON AND SPINAL CHORD OF HEMIPLEGIC PATIENTS.

Dr. Ludwig Tuerck has described the microscopic appearances presented by the brain and spinal chord of three Hemiplegic patients. His observations tend to show the necessity of employing other means than the unaided eye, in the investigation of parts supposed to be the seat of disease. We not unfrequently hear of *post-mortem* examinations, especially of the nervous centres, in which no morbid appearances have been detected either by the eye or by feel. The state of the brain or spinal chord is also often vaguely described as being " somewhat hardened", " of rather firmer consistence than usual"; and nothing more is said about the subject. Now we have no doubt, that if a microscopic examination were made in such cases, we should often find unequivocal proofs of disease. The first and second of the cases related by Dr. Türck, entirely prove the correctness of this assertion. In them, the spinal chord was apparently healthy, and of proper consistence ; but when examined with the microscope, was found to be the seat of disease.

Case I. The first case was that of a woman aged 73, who had had paralysis of the left side for six months. There was an apoplectic cyst on the outer side of the right corpus striatum and optic thalamus, with white softening of the latter ; and numerous granular corpuscles *(körnerkörperchen)* were met with as deep as the crus cerebri. The spinal chord appeared healthy to the naked eye ; but on dividing it into its lateral halves, it was found, under

the microscope, to contain a large number of sinular bodies. The left lateral half contained a large number, while they were much fewer on the right side: Dr. Türck then made fine vertical sections from without inwards ; and found that the most superficial sections on the left side showed the granular corpuscles in great number, while in a similar situation on the right side they were entirely absent, and only began to appear singly towards the middle line. From this examination, the interesting result was brought out, that the disease in the chord was limited to the same side as that on which the paralysis had existed—the opposite side to that on which the brain was diseased.

Case II. The second case was that of a man, forty years of age, who had laboured under paralysis of the right side for half a year. There was an apoplectic cyst in a similar situation to that mentioned in the first case ; the right thalamus had undergone white softening as deep as the crus cerebri, and presented an abundance of granular corpuscles. The pons Varolii, which was not examined in the first case, also contained them ; the medulla oblongata presented them in abundance on the right side, but more sparingly on the left ; and on the left side of the spinal chord they were very abundant, while they were wanting on the right. From the pons downwards, all the parts were of normal consistence, and appeared to the naked eye to be healthy, both entire and in section.

Remarks. Two explanations may be given of the origin of these bodies. They either arose from an extension of the disease from the crus cerebri downwards, or they were the effect of the hemiplegia, produced by disease of the brain, which induces a process of exudation in one half of the spinal chord. As to the first of these suppositions, it is difficult to understand why the extension of the disease should be confined to one side, and especially why it should not have extended to the opposite side at the point of decussation. With regard to the second explanation, it is to be observed, that in both cases there was a high degree of paralysis of motion, while sensation was but little affected : and hence, if this explanation be adopted, the exudation process would have to be considered as having a connexion with paralysis of the motor elements.

In several other cases of Hemiplegia, from cerebral diseases, the spinal chord has been found healthy.

Case III. The third case is one of a woman, forty years old, who had had Hemiplegia of the left side for a year and three quarters. The upper extremity was perfectly paralysed ; the lower one less so ; sensibility appeared normal. There was an old apoplectic cyst in the right corpus striatum and optic thalamus. Numerous granular corpuscles were observed, which rapidly decreased in proceeding downwards ; so that the right crus cerebri, the pons varolii, the medulla oblongata, and the upper sections of the left half of the cervical portion of the chord, only presented them singly. They were much more numerous from the origin of the third to that of the seventh cervical nerves. From this point downwards, they again decreased, but at the lower part of the dorsal portion again began to increase, until they reached their maximum at the origin of the lumbar nerves. From this point they again diminished, and at the origin of the lower sacral nerves they entirely disappeared. The nerves on the diseased side were found perfectly free from the corpuscles, even a few lines from their origin. The right half of the spinal chord presented them only in the middle line, the medulla oblongata only a very few : the left half of the pons, as well as the left crus cerebri, contained none.

The fact, that in this case the disease was not equally extended, the parts between the shoulder and hip-joints, as well as that between the brachial plexus and the encephalic cyst, shewing very few of the corpuscles, tends to point out, that the disease of the spinal chord cannot be considered as an extension of that which existed in the brain. [*Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien.* January 1850.]

EPILEPSY COINCIDENT WITH EXOSTOSIS OF THE LEFT PARIETAL BONE.

The following interesting case occurred in the practice of M. Gamberini, of Turin.

A banker, aged 34 years, had a fall on the left Parietal Bone, and subsequently felt frequent cephalalgia, followed by slight convulsive movements. Epilepsy soon supervened; the attacks of which became more and more severe and frequent. The patient had a sad countenance, his physiognomy was anxious and expressive of suffering, and his look dull and askance. He complained from time to time of an indescribable pain, preceding an epileptic attack. This sort of *aura*, which was often absent, commenced in some points of the upper limbs, and proceeded rapidly towards the heart. The attacks occurred twice or thrice in the week, sometimes even several times on the same day. Drastic purgatives, local bleeding, valerianate of quinine, artificial cinnabar, and nitrate of silver, were employed without any success. The patient then complained of a dull pain at the part of the parietal bone on which he had fallen. A periostosis was observed, which was only painful at night; and, as it increased in size, the epileptic attacks seemed to diminish in frequency and intensity. As the patient had had blennorrhagia some years previously, M. Gamberini thought that the periostosis might have had a syphilitic origin. He therefore ordered a blister to be applied to the swelling, and prescribed the iodide of potassium, internally and externally. Under this treatment, the periostosis diminished in size, and the attacks became at the same time less frequent, and more easy to master. The persistence of nocturnal cephalalgia caused M. Gamberini to decide on employing mercury: but he had scarcely commenced this, when the patient was seized with a severe attack of pneumonia. The energetic treatment which this affection called for, cured at the same time both the periostosis and the Epilepsy. When M. Gamberini last saw the patient, he had been free from attacks during three months. [*Bulletino delle Scienze mediche di Torino*, April 1848: and *Annales Médico-Psychologiques*, January 1850.]

In quoting this case, the editor of the *Annales* remarks, that the Exostosis is sufficiently explained by the fall on the parietal bone, without having recourse to the blennorrhagia. He further inquires, whether the favourable influence of the energetic treatment required for the pneumonia, does not tend to shew that the periostosis was, in fact, nothing more than simple sanguineous infiltration in the diploe, which first produced compression of the brain, and then epileptic convulsions?

SURGERY.

DR. R. W. SMITH ON DISJUNCTION OF THE EPIPHYSIS OF THE HUMERUS.

In the *Dublin Quarterly Journal of Medical Science* for February 1850, Dr. R. W. Smith has published an article on Disjunction of the Epiphysis of the Humerus—an accident which he considers to have been generally confounded with *supra-condyloid fractures* of the bone, or with luxation of the fore-arm backwards. The author points out, from the writings of Malgaigne, Vidal de Cassis, and others, the error into which they have fallen, as well as the incorrectness of the idea that the line of the junction of the epiphysis with the shaft is above the condyles; whereas these belong to the shaft of the bone, while the epiphysis comprises nothing but the capitulum and trochlea, Dr. Smith then proceeds to observe:

"The lower articular surface of the Humerus in the young skeleton differs from that of the adult bone in the following remarkable particular; namely, that the capitulum, or that portion which articulates with the head of the radius, is nearly double the size of the trochlea; so that the inferior surface of the former is nearly upon the same level as that of the latter process; and

the Humerus, when placed resting by its lower extremity upon a horizontal plane, assumes nearly a vertical position. In short, the radial is fully developed long before the ulnar portion of the epiphysis ; and, as will hereafter appear, the knowledge of this fact is not destitute of practical importance in the diagnosis of that embarrassing accident, fracture through the line of junction of the epiphysis with the shaft, or, in other words, fracture of the Humerus immediately *below* the condyles. A description of the signs which characterize this lesion must also be, to a certain extent, an enumeration of those which accompany dislocation of both bones of the fore-arm backwards; many of the symptoms likewise belong to the transverse fracture, immediately *above* the condyles.

"The injury usually results from a fall upon the elbow, but I have known it to occur from a fall upon the palm of the hand, the fore-arm being at the time extended upon the arm. The limb immediately becomes powerless, severe pain is experienced in the elbow, and the following signs present themselves :—The fore-arm is flexed, and the hand in a middle position between supination and pronation. The olecranon, drawn upwards and backwards by the triceps muscle, mounts above the level of the condyles of the Humerus, these three processes forming the points of a triangle, the base of which is below. The antero-posterior diameter of the elbow is greatly increased, and the lower end of the Humerus can be felt projecting in front. The application of a gentle force is usually sufficient to restore the normal appearances of the limb, but when the parts are abandoned to themselves, the deformity soon recurs. If, after the removal of the displacement by extension, the fore-arm be rotated upon the Humerus, or if the surgeon, as recommended by Dupuytren, grasps the arm in one hand, and the fore-arm in the other, and then moves them backwards and forwards upon each other, the crepitus which characterizes fracture can generally be elicited. The motions of flexion and extension are exceedingly limited and painful.

"The signs above enumerated are sufficient to demonstrate, that the injury in question may readily be confounded with transverse fracture of the Humerus above the condyles, or with luxation of the fore-arm backwards. The former would be a mistake of comparatively slight importance, inasmuch as the same treatment is applicable to both lesions ; but the latter must be considered as a grievous error, the results of which are nearly as lamentable as those of leaving a true luxation of the joint unreduced. The observations of Dupuytren respecting the danger of confounding fracture immediately *above* the elbow, with dislocation backwards, apply with peculiar force to the injury we are considering. 'If', says this distinguished surgeon, 'the opinion that the case is one of luxation be acted upon, extension and counter-extension are employed, the reduction is accomplished without muc' difficulty, a roller is applied, and the surgeon congratulates himself upon the ease with which he has restored the bones to their places. But soon, the displacement is reproduced, and at the end of a few days, in the midst of the swelling, something unnatural is felt. This accident is generally ascribed to the patient, who is charged with being intractable ; the reduction is again effected, but the deformity soon recurs, and considerable swelling then supervenes. As long as this condition lasts, the surgeon continues secure ; but when the swelling has disappeared, after the lapse of a few weeks, he discovers the error which he has committed, but the mischief cannot now be repaired, the motions of the joint are never perfectly regained, and the deformity is incurable.'

"In cases of fracture traversing the line of the epiphysis, the transverse diameter of the tumour which projects in front, is equal to that of the opposite humerus, measured anteriorly from condyle to condyle ; in this respect, the accident resembles the dislocation of both bones backwards, but differs from fracture *above* the condyles. The outline of this osseous tumour is rounded, and presents to the feel none of the irregularities or sharpness of an

ordinary fracture, and upon its inferior surface, which is convex, and limited at either extremity by the condyles, neither trochlea nor capitulum can be distinguished. When the joint is viewed posteriorly, two osseous prominences are seen, and can be distinctly felt; they are both placed above and behind the plane of the condyles, but are themselves situated (if the patient be not more than six or eight years of age) nearly upon the same level,—the internal, however, being always a little higher up than the external. At a more advanced age, the distance between these two prominences is observed to be greater, in consequence of the increased development of the internal, which is formed by the olecranon, the summit of which process grows by an epiphysis. At no period of life, however, at which it is possible for the accident in question to happen, is the distance between the two projections nearly as great as it is always found to be between those which, in cases of luxation of both bones of the fore-arm backwards, constitute so marked a feature of the injury. In the latter accident, the distance averages about one inch and a half: while, in the former, it is seldom more than three quarters of an inch; the external tumour, in this case, being formed by the *capitulum of the Humerus*, still surmounting the head of the radius, for which, in consequence of the concave form of its superior surface, it is extremely liable to be mistaken, if attention be not paid to the diagnostic sign which has just been mentioned.

"For the history of the following case I am indebted to my friend, Dr. James S. Hughes, one of the surgeons of Jervis-street Hospital:

"Case. Michael Fleet, æt. 12, was admitted into Jervis-street Hospital on the 24th of August, 1847. He stated that whilst standing in the fruit market, a boy, running against him with great violence, threw him down; and that having, in the act of falling, stretched out his arm to save himself, the other boy fell with all his weight across the back of the extended limb. On his being raised from the ground, it was found that his arm was powerless, and he was at once brought to the hospital, where he was seen by Dr. Hughes, in twenty minutes after the occurrence of the accident, and consequently before the characteristic features of the injury had become obscured by swelling. The fore-arm was semiflexed, and the hand in the position of half supination; the olecranon, which formed a remarkable projection, was placed above and behind the condyles of the humerus. A second osseous tumour, the upper surface of which was concave, and which was supposed at first to be the head of the radius, could be distinguished behind the outer condyle. The lower extremity of the humerus formed a considerable prominence in front. Judging from these appearances, Dr. Hughes' first impression was, that he had to deal with a case of dislocation of both bones of the fore-arm backwards, but finding that the joint admitted of a much greater amount of flexion than can usually be communicated to it in such cases, he began to suspect the existence of a fracture. Extension was, therefore, made by an assistant, while Dr. Hughes, grasping the arm with one hand, and the fore-arm with the other, moved them in opposite directions, and thus succeeded in producing a distinct crepitus. The diagnosis was therefore made, that the injury consisted in a fracture of the humerus through the line of junction of the epiphysis with the shaft, with displacement of the bones of the fore-arm, *along with the epiphysis*, upwards and backwards.

"A moderate degree of extension and counter-extension was sufficient to remove the deformity; the limb was placed in the semiflexed position, and secured by angular splints and a roller. It was, however, found extremely difficult to prevent a recurrence of the deformity; and when the patient left the hospital, a slight degree of displacement still existed. Shortly after his dismissal I saw him, in consultation with Dr. Hughes and Dr. Power, and having made a very accurate examination of the limb, I came to the conclusion that the original injury had consisted in a simple Disjunction of the Epiphysis; for, although the deformity was now not considerable, the prin-

cipal characteristic features of this lesion, as they have been described in the preceding pages, could still be recognized. The boy had recovered very considerable use of the limb; he was able to extend the fore-arm perfectly, and could flex it beyond a right angle. The antero-posterior diameter of the joint was greater than that of the opposite side; the tendon of the triceps was in relief: the outline of the tumour which projected in front was rounded, but it was impossible to feel distinctly either the capitulum or the trochlea of the humerus. Two osseous tumours, formed by the olecranon and the capitulum, were seen posteriorly; but although they were still situated somewhat behind the plane, they were not now above the level of the condyles. The callus which had been effused, obscured, in some degree, the features of the injury. About this time, the patient was also seen by Mr. Adams, who adopted the same views as to the nature of the accident.

"From what has been above stated, it is manifest that (contrary to what the statement of authors would lead us to infer) implicit reliance is not to be placed upon the loss of the normal relation between the olecranon and the condyles of the humerus, as a means of distinguishing between luxation of the fore-arm backwards, and fracture of the lower extremity of the humerus. It is evident that there is an accident of the elbow, in which the bones of the fore-arm lose their natural relations to the condyles, and yet that accident is not necessarily a dislocation, but may be a fracture through the line of the lower Epiphysis of the Humerus, which line is situated *below* the condyles.

"It is a matter of practical advantage to be acquainted with the periods at which the different Epiphyses unite with the shafts of the bones to which they belong; for instance, the lower Epiphysis of the Humerus becomes identified with the shaft long before the superior: the separation of the latter by external violence, may, therefore, occur at a period of life when the disjunction of the former would be impossible.

"The symptoms which belong to this injury, in common with fracture above the condyles, may be thus briefly enumerated: shortening; crepitus; the removal of the deformity by extension, and its tendency to recur when the extending force is relaxed; the presence of an osseous tumour in front of the joint; the increase in the antero-posterior diameter of the elbow. It differs from the supra-condyloid fracture, in the greater transverse breadth and regular convex outline of the anterior tumour: in the existence of two tumours posteriorly; in the loss of the normal relation of the olecranon to the condyles.

"It resembles dislocation of both bones of the fore-arm backwards, in the following particulars: The transverse diameter of the anterior tumour is the same in each case; so also is the antero-posterior breadth of the elbow; and in both the olecranon ascends above the condyles, the limb is shortened, and two osseous prominences can be distinguished posteriorly. It differs, however, from luxation, in the existence of crepitus, in the tendency of the deformity to recur, in the anterior tumour being destitute of trochlea and capitulum, and in the circumstance of the two posterior tumours being nearly upon the same level".

OBSTETRICS.

UTERINE HYDATIDS—ANOMALOUS NERVOUS SYMPTOMS.

Dr. J. G. Davey, of the Ceylon Medical Service, has published in the *Indian Register of Medical Science*, and also as a separate pamphlet, an account of a case of Uterine Hydatids, which occurred to him at Colombo, in the end of 1847. The interest of the case lies in its exceptional character—in the peculiar nature of the nervous symptoms which accompanied it. These symptoms, in our opinion, must be attributed to idiosyncrasy, to constitutional peculiarity; and cannot be considered as unobserved indications of Hydatids.

Uterine Hydatids are generally connected in their origin with blighted

ova; and the usual symptoms are those of moles, etc., more or less simulating pregnancy. The author judiciously enough remarks, that "however much the practical physician or surgeon may be inclined to refer to authority, ere he step out of the beaten track, yet unless he, occasionally, think and act for himself—and upon his own responsibility—the well-being, even the life of his patient, will prove the penalty of his indecision of purpose." It would be interesting to know, whether the lady, who was the subject of the case, has experienced any anomalous symptoms during pregnancy, if she have been in that condition.

The following is an abridgement of Dr. Davey's contribution.

Case. Mrs. T., aged about 24, a lady of sanguineous temperament, usually in the enjoyment of excellent health, and very recently married, applied to Dr. Davey, in November 1847, suffering from an unusual degree of the diseases of pregnancy, in the form of gastric irritation, uncontrollable by the use of saline effervescing draughts, hydrocyanic acid, creasote, opium, etc. The patient getting daily more exhausted, the induction of premature labour was proposed; but, as a previous resort, nitrate of silver was applied to the os uteri and parts adjacent, and the same remedy was administered in the form of pills.

Premature labour was at last decided on; and the os uteri was dilated by the introduction of a large male catheter; this was repeated at the end of forty hours, after which uterine action set in, and in a day and a half produced a sudden and alarming expulsion of "waters", mixed with coagula, as Dr. Davey was informed.

The patient went on improving till the eighteenth or nineteenth day after the escape of the uterine contents, when Dr. Davey was informed that the size of the uterus had rather increased than diminished. The vaginal discharge had also assumed a sanguineous appearance. He considered that some portion of the ovum had been retained, after the first expulsion.

"On my next visit, after three days, I found all the symptoms much aggravated; the size of the uterus had, very evidently, much increased. Mrs. T. complained of a painful sense of distension of the organ, as if were about to '*burst*'; and told me, moreover, that she was losing the use of her fingers, the extremities of which had become insensible to feeling. The voice was reduced to a mere whisper; and the act of deglutition was performed with some difficulty. The repetition of the induction of uterine action was proposed, but was overruled.

"A week had hardly elapsed ere the case became so alarming, and all its symptoms so much aggravated, that further delay would have been only criminal. The uterine tumour had risen, by this time, to the umbilicus, and was exquisitely tender. The hands and feet, arms and legs, from the elbows and knees downwards, were completely *paralysed*—not a single fibre in any one muscle could be called into action. The extensors and flexors of both the thigh and upper arm were almost powerless. The nerves of sensation, although not absolutely paralysed, were much affected; the extremities *felt*, for the most part, inflated and softened; and now and then pricking pains were experienced in different parts of the limbs. Both respiration and deglutition were much impaired; in consequence, doubtless, of the abstraction of nervous power from the muscles concerned in these respective acts.

"The dilatation of the os uteri was performed on two different occasions. Expulsive pains came on: and, after continuing very regularly for two or three and twenty hours, terminated in the evacuation of a large quantity of *Hydatids!* I was now led to hope that the parts affected would, in the course of time, re-acquire their normal condition; nor did the progress of the case, immediately succeeding to the escape of the Hydatids, do else than encourage this hope; for thirty hours had scarcely elapsed, ere the act of *deglutition* was unattended with the slightest difficulty or inconvenience.

It is worthy of remark, that from the third to about the tenth day, the lacteal secretion was continued.

"At the expiration of a week, the extensor and flexor muscles of the thigh and upper arm had regained considerable power; nor were the flexors and extensors of the fore-arm altogether useless; the digital extremities were capable of being very slightly moved. The lower extremities, although improved, and their motive power sensibly increasing, yet did not at this time keep pace with the upper. The nerves of sensation everywhere appeared recovering their natural tone, and the sense of touch was described as returning to its original and healthy state; at the same time, the slightest degree of pressure along the course of the radial and ulnar nerves, in either arm, caused much uneasiness and pain. Mrs. T.'s general health was steadily improving. A tonic regimen was pursued with apparent advantage. On the sixteenth day from the escape of the Hydatids, she was removed from her home to a more desirable locality; and quickly afterwards, the voice began to re-assume its original character—it lost the faint whisper which before characterized it.

"In order to facilitate the restoration of the functions of the spinal system, I now employed *galvanism*. Repeated shocks were thrown along the chord and extremities, and active friction of the parts affected was recommended. Stimulating liniments were also applied. This treatment was directly followed by an extreme restlessness and sleeplessness—the cerebro-spinal functions becoming much affected. Successive hours were passed in a kind of delirious excitation, and in an involuntary jactitation of the muscular system, particularly of the lower extremities; the latter was commonly accompanied with acute neuralgic pains. It is worthy of remark, that the fingers and toes were scarcely, if at all, affected by this peculiar and painful *chorea*. The galvanism was now omitted; and in its stead sedatives, particularly morphia, were prescribed, with a view of allaying the irritation of the brain and spinal chord; for there were no indications of anything like vascular repletion,—far from it. Blue pill and aperients were occasionally used to preserve a healthy state of the *primæ viæ*, and the carb. ferri with quinine were internally administered. The effects of this altered treatment were every way satisfactory, inasmuch as all cerebral excitement and incoherence ceased, and a proper amount of sleep was insured, the painful and involuntary muscular action was duly controlled, the tongue became cleaner and yet more healthy looking than before, the appetite improved, and the bowels were preserved in a proper state. The constitutional powers also appeared strengthened; but nevertheless much remained to be done towards the complete recovery of the spinal functions of the extremities: for although the *flexion* and *extension* of both the upper and fore-arm, and pronation and supination, were now little short of perfect, yet the deeply-seated muscles of the fore-arm, those attached to the phalanges, the flexors and extensors of the fingers, and those belonging to the thumbs, were capable of only very slight movements; and those of the lower extremities, particularly those muscles attached to the inferior phalanges, were in a similar condition."

At the end of between four and five months from the expulsion of the Hydatids, during two of which the patient had experienced some benefit from the change of air, Dr. Davey determined to *Mesmerise* her, with the view of restoring the muscular function. He is evidently one of those who imagines that "*post hoc, ergo propter hoc*"; for he attributes the recovery which took place to the Mesmeric passes which he made. As in many other cases, faith in the potency of the means employed was probably of great service. On the day after the fourth Mesmerism, the patient found that she could nearly raise one of her hands. In December 1848, only a slight degree of stiffness remained in the fingers, when much exercised with music; and one of the ankles was slightly weak. The general health was perfect.

RUPTURE OF A THROMBUS OF THE VULVA DURING PARTURITION: FATAL HÆMORRHAGE.

The occurrence of Thrombus of the Vulva during labour is not absolutely rare: but it is very uncommon to see it arise and burst in a few moments, inducing almost instantaneous death by frightful Hæmorrhage. Peu is the first who has reported a case of this kind. Dencux has, with some trouble, been able to collect some others. The following case, related by M. Wyffels, in the *Annales de la Société d'Emulation de la Flandre Occidentale*, is hence interesting:—

Case. On the night of the 6th September, I was called to a woman who had been a few hours in labour. She was robust, of sanguine temperament, possessed considerable *embonpoint*, and enjoyed perfect health: she had had eight children, all the labours having been easy. During, however, the last weeks of the present pregnancy, walking had become very painful, and the lower extremities were very œdematous. On examination, I found the os uteri well dilated, the membranes entire, and the head of the child not yet descended. The uterine contractions being powerful, and the position of the child good, I prognosticated a prompt delivery. My surprise was great, when, after some well-marked pains, I perceived the *labium majus* of the right side become suddenly distended, rapidly increase in size, and become, in a few instants, tense and fluctuating. At first, I imagined it was a hernia: but soon afterwards the tumour, which had gone on increasing in size, in spite of manual compression, so as to attain the size of a closed fist, burst, during a pain, with such violence, that the blood was projected to the distance of several feet. Believing this to be a very serious case, I sent in haste for my forceps, which I had neglected to bring, in consequence of the facility of the former labours. In the meantime, blackish venous blood continued to flow from the aperture, which was in the external and middle part of the *labium majus*, and was of sufficient size to easily admit the thumb. During uterine contraction, the blood was thrown out in jets, but did not flow with intensity in the intervals. From this moment, and after several pains, the woman began to complain of suffocation, and at last said she was going to die for want of air. In a few minutes she died. In three quarters of an hour my forceps were brought, with which I extracted a dead child.

M. Wyffels does not think the woman died of Hæmorrhage, although it was abundant, but prefers to attribute the death to *the absorption of air, or its introduction into the veins.* It seems rather to have arisen from the Hæmorrhage having been left to itself, without any attempt to arrest it by compression or plugging: the Hæmorrhage might not have been easy to arrest. Osiander reports a case which, in spite of all his efforts, even after labour was terminated, ended fatally; but perhaps this case is unique. In that of Peu, and in some others, death only occurred in the absence of the accoucheur, or because he had been called too late. In general, the accomplishment of parturition is sufficient to arrest Hæmorrhage: sometimes it is advantageous to use astringent injection, and it seems scarcely probable that compression and plugging can fail. [*Revue Médico-Chirurgicale de Paris.* December 1849.]

RETENTION OF URINE AFTER DELIVERY: EXTRAORDINARY DISTENSION OF THE BLADDER: PECULIAR CONFORMATION OF THE URETHRA.

M. Malgaigne relates the following case in the *Revue Médico-Chirurgicale de Paris*, for December 1849:—

In contradistinction to the accumulation of an enormous quantity of urine in the bladder for several weeks, the following case presents an instance of rapid accumulation to an unprecedented extent:—

On the 16th August, I was called, by my friend M. Drache, to a woman who

had been delivered four days, but had passed no urine. The midwife had several times attempted, but without success, to introduce the catheter. M. Drache also made the attempt, but found an obstacle some lines from the orifice of the urethra, and he was unwilling to use force. On my arrival, the abdomen was so distended, and so much resembled that of a woman at the full period of pregnancy, that my first thought was, to make sure that there was not another child. On this subject, however, there could be no doubt; besides, the patient had not passed urine for four days, and was suffering intense desire for micturition. I learned that she had never had any disease affecting the urethra. But her husband informed me, that in her the stream of urine, instead of being directed downwards and forwards, passed forwards and upwards; and that her eldest daughter had the same peculiarity.

From this I concluded, that the urethra mounted higher than usual behind the symphysis pubis, and that the ossa pubis presented the obstacle to the passage of the catheter. Having placed the woman in front of her bed, I introduced an ordinary catheter, by first passing it from below upwards, then directing it upwards and backwards. I assured myself that there was not the least trace of prolapsus of the bladder or urethra. The bladder was emptied at once, without inconvenience or difficulty; the quantity was truly astonishing. I had it weighed immediately: it was 3,300 grammes (nearly 107 ounces, English apothecaries' weight). I have often had to treat severe cases of Retention of Urine, even requiring puncture; but I have never before known the bladder to contain such a quantity of urine.

CONDITION OF THE OVARIES AND UTERUS, OBSERVED IN A YOUNG WOMAN ASSASSINATED SHORTLY AFTER MENSTRUATION.

The researches of MM. Pouchet, Bischoff, and others, have placed beyond a doubt the spontaneous detachment of ovula during menstruation. The following case, recorded by Dr. Janzer, in the *Medicinische Annalen*, vol. xiii, part 4, is an additional proof; it moreover illustrates the changes which the mucous membrane of the uterus undergoes during the menstrual period.

Case. The young girl who was the subject of the observation, had menstruated four days before being murdered. She had never been pregnant. The autopsy was made sixteen hours after death. The surface of the left Ovary presented a deep red spot, surrounded by finely injected vessels. This spot was formed by a small globular mass, imbedded in the Ovary, and of an intense red through its whole thickness. The mass in question was separated from the tissue of the Ovary by a thin yellow envelope, and was composed of fibres like those of areolar tissue, arranged in superimposed layers. The yellow envelope was formed by the same kind of fibres, among which there was a pretty considerable quantity of fat, not contained in cells. Near this body, there was seen a small yellow, spherical, modulated mass, composed of areolar tissue and fat. The right Ovary contained two yellow bodies. The Fallopian tubes, which did not embrace the Ovaries, were tumefied in the upper thirds. On slight pressure, a white matter issued from them, resembling pus, and entirely composed of round epithelial cells, some of which were furnished with vibratile cilia. No ovule, nor any traces of spermatozoa were found.

The uterine mucous membrane, between the body and the neck, was much swollen. In the Uterus itself, it formed a velvety membrane, glossy and brilliant, easily detached with the handle of the scalpel, and presenting a fine network of vessels. This mucous membrane was evidently thickened; it was composed of the uterine glands, ranged perpendicularly alongside each other, and fitted with cylinder epithelium, not ciliated. The structure between the uterine glands was composed of a network of delicate fibres, of some nucleated cellular fibres, and of amorphous tissue. The surface of the uterus was covered with a thin layer of mucus, and lined with cylindrical epithelium,

without cilia. The orifices of the Fallopian tubes were open. The vaginal mucous membrane was pale, but was only covered with a thin layer of mucus, containing epithelial cells.

It results from this observation, that the mucous membrane of the uterus presents, during menstruation, characters analogous to those which exist during gestation; such as the hypertrophy of the uterine follicles, and the disappearance of vibratile cilia. [*Gazette Médicale de Paris*, 23rd March, 1850.]

TOXICOLOGY.

CASE ILLUSTRATIVE OF THE TREATMENT AND FATAL DOSE, IN POISONING WITH HYDROCYANIC ACID.

By Dr. Robert Christison, of Edinburgh.

The following is one of the most interesting and instructive cases of Poisoning by Hydrocyanic Acid, with which we are acquainted. We copy, with some slight verbal curtailments, Dr. Christison's communication from the *Edinburgh Monthly Journal*, for February 1850.

A gentleman, about sixty years of age, whose mind had begun to give way under the pressure of dissipation and misfortune, and who had several times threatened to commit suicide, hastily summoned his wife one evening, told her he had just taken Prussic Acid to put an end to his miseries, and immediately fell down senseless on a sofa, without either cry or convulsion, but drawing his breath deeply, forcibly, and slowly. Medical aid was instantly sent for in all directions. Nearly half an hour appeared to have elapsed before I reached him. Dr. Adam Hunter and Mr. Carmichael had arrived, however; the stomach-pump had been immediately resorted to; and the first stroke of the pump was made as I entered the room.

The convulsive respiration at the outset had been soon succeeded by regular breathing, with snorting inspiration, and moaning expiration. The insensibility was complete from the first; the body was excessively relaxed, and without any convulsive movement; the eyes were wide open, staring straight forward upon vacancy, injected, watery, and with the pupils somewhat contracted, but not more so than they often are naturally in persons of his age; and the face and head were congested and hot. The introduction of the tube of the stomach-pump did not elicit the slightest sign of consciousness. In this state I found him on my arrival—wholly unconscious under all ordinary mechanical stimulation, totally relaxed and powerless, and breathing deeply, laboriously, and stertorously, but with ordinary frequency. The pulse was above 100, very small, feeble, yet regular.

The first liquid withdrawn by the stomach-pump, amounting to six ounces, was a colourless, nearly clear, watery fluid, being little else than water introduced by the pump upon an empty stomach; for he had taken no food since breakfast. My two friends could not observe any odour of Hydrocyanic Acid in this fluid, even while warm and fresh drawn; and I could detect it only faintly, and, I must admit, equivocally, on whiffing it slowly and steadily for some seconds. Nor was there any Hydrocyanic Acid odour in his breath, or near him, or in any part of the room.

The stomach was quickly and repeatedly cleared out, and ammonia was applied to the nostrils from time to time, but without any sign of reviving consciousness. His head was then brought to the edge of the sofa, and, while it was held over a bucket, a stream of cold water was gently and steadily poured over it for two minutes from a large jug, a foot or so above him. During this proceeding, the breathing rapidly became deeper and softer, and without snoring. The head and face, very much cooled, presented less turgescence. The eyes were suddenly turned in a lateral direction, and then an attempt seemed to be made to fix them upon any one who put a question in a firm voice. From this time he slowly recovered without any further treatment; and, in an hour and a half from the time when he gave

the alarm, he was able to mutter Yes and No correctly when questioned, and he could turn on his side without assistance. When not roused, however, by being spoken to, he fell into a restless sopor, with moaning and tendency to shivering. In three hours he was tolerably sensible, but drowsy: he slept profoundly all the subsequent night; and next morning he was quite sensible, though still sleepy. His mind was evidently unhinged, but not more than before the act; and it has continued more or less so ever since, rendering seclusion from general society indispensable.

As, in this instance, no bottle could be found in the room or under the window, and no satisfactory Hydrocyanic odour could be perceived in the apartment, in the breath, or in the fluid first withdrawn from the stomach, a doubt might justly have arisen whether Hydrocyanic Acid had been really swallowed. The symptoms, however, were so similar to those described as attending the slower cases of poisoning with this substance, as to leave at the time scarcely any doubt in my mind. Accordingly, on examining the liquid first withdrawn, I detected the poison in it by chemical analysis. It was first subjected to distillation, after the addition of a few drops of sulphuric acid; and half an ounce of clear fluid was thus drawn off. This had only a very doubtful Hydrocyanic odour, although there was no other odour strong enough to cover it. But on adding two drops of the pharmaceutic solution of potash, then a few drops of the two sulphates of iron, mixed in the proportion of one equivalent of sesqui-oxide-sulphate and two of protoxide sulphate, and lastly a single drop of sulphuric acid, a considerable precipitate of Prussian blue was obtained instantly and characteristically. Meanwhile the patient gradually admitted, that he had asked, in the morning of the act, at a certain druggist's, for a sufficient dose of Prussic Acid, of full strength, to kill a dog, and that he got a drachm. The druggist afterwards supplied Dr. Hunter with what he believed to be a similar quantity from the same stock. This I found to amount to forty-five minims: and, on applying the very convenient test of the *Edinburgh Pharmacopœia*,[1] I ascertained that it was of the due strength, so that our patient had taken between a grain and a half and two grains of radical Hydrocyanic Acid.

The Practical Deductions to be drawn from this case are various and not unimportant.

1. The intensity of the symptoms, while there still remained some poison unabsorbed in the stomach, renders it probable that the treatment saved the patient; and, therefore also probable, that a grain and a half might prove fatal in less favourable circumstances.

2. That the odour may not be detected in the breath, even in the first fluid drawn from the stomach.

3. A piercing cry does not invariably usher in the action of a poisonous dose of Hydrocyanic Acid.[2]

4. The case shows that the cold douche to the head is an energetic remedy, when the other means available in so urgent an emergency are inefficacious.

MATERIA MEDICA AND PHARMACY.

ALMOND OIL AS A SUBSTITUTE FOR COD-LIVER OIL.

Dr. P. M. Duncan, Physician to the Essex and Colchester Hospital, and Mr. R. S. Nunn, Surgeon to the same Institution, have communicated to the *Provincial Medical and Surgical Journal* for March 20, the following remarks

[1] The test referred to is the precipitation of a cyanide of silver, by means of a solution of the nitrate. Editor.

[2] Both in men and animals, a piercing cry has been generally observed to usher in death by Prussic Acid, and the recorded exceptions to this rule are, we will venture to say, very few indeed. It must be remembered, that the case detailed in the text is *not one of fatal poisoning*, and that this fact, and the smallness of the dose, make it difficult to believe that the toxicological phenomena were developed in all their completeness. Editor.

on the applicability of the common sweet Almond Oil to all cases for which Cod-liver Oil is prescribed.

"In a flat and damp agricultural district, where, amongst a certain class, intermarriage is very frequent,—where intermittent fevers, scrofula, and all kinds of disease characterised by the presence of an adventitious product in the system, are very common, and where, on account of scanty food and clothing, diseases are generally of an adynamic type, it is not to be wondered at, that medicines which enhance the nutritive powers should be very largely prescribed.

"We have always subscribed to that opinion, which denies the specific agency of the Oleum Jecoris Aselli, in tuberculous and like diseases, and attributes the benefit conferred to its influence on the assimilative processes. We have prescribed the Cod's-liver Oil with great success, both in hospital and in general practice, and consider that its only drawbacks are its nauseous flavour and high price. In June last, we agreed to prescribe a vegetable oil instead of the Oleum Jecoris; and our experience is highly favourable to the therapeutical virtues of the Oleum Amygdalæ. We have reason to declare that the Almond Oil and the Cod's-liver Oil act precisely in the same manner; and the first-mentioned oil has anything but a disagreeable taste, and can be obtained for at least one-third of the price of the best Cod's-liver Oil. Our experience of the beneficial effects of Almond Oil has been derived from upwards of two hundred and fifty well observed cases; in no one case has it purged, and the contrary effect is very frequently produced. We are in the habit of prescribing the oil without any adjunct, at first in one drachm doses, half an hour after every meal. The dose is gradually increased. A drop of Eau-de-Cologne, or of some essential oil, renders the 'neat' oil anything but disagreeable to the taste. It is an excellent vehicle for the exhibition of iodine in small doses, the latter being rubbed down with a small quantity of olive oil, and then added to a larger amount of Almond Oil. The following formula has been of great use in several cases of syphilitic diseases of the bones and skin, in broken-down constitutions, in chronic pleurisy, and in many cases of chronic enlargement of the glands of the neck:—R. Olei amygdalæ ʒ ss; olei olivæ ʒij; iodinii gr. ½. M. A third part to be taken three times a day.

"The influence of half an ounce of this Oil of Almonds, taken daily, upon the weight of some patients progressing in health under its exhibition, is very remarkable. In one case, there was a weekly increase of 2lbs., and in another, of 4lbs. Care must be taken to attend to the biliary secretion during the exhibition of the oil, which is contraindicated when there are evidences of local congestion, or of inflammation."

MINERAL SPRINGS CONTAINING MANGANESE.

In the London Journal of Medicine for 1849, pp. 871 and 881, we gave an abstract of the researches of M. Hannon on the Therapeutic uses of Manganese, a remedy which he considered equal, and often superior, to iron. The Academy of Medicine in Paris, as stated in the *Gazette Médicale de Paris* for 23rd March, received from M. Caventou, reporter of their Committee on Mineral Waters, a statement that the waters of Fraisse, in the valley of Cransac, contain Manganese. It would be desirable to study the physiological and therapeutical properties of these springs. The Editor of the *Gazette Médicale* has several times witnessed their successful use in chronic glandular engorgements, which had previously been treated by various medicines without any good results.

CITRATE OF IRON AND MAGNESIA.

The Citrate of Iron and Magnesia appears, to M. Van der Corput, likely to come into general use among ferruginous preparations, being easy of administration, and not liable to produce constipation. It is prepared by dissolving

two parts, by weight, of recently precipitated hydrated oxide of iron in a solution of three parts of citric acid: the liquor is then saturated with Carbonate of Magnesia, and evaporated to dryness. The salt is in the form of shining brown scales; the taste is sweetish, very slightly inky, and not at all disagreeable. It is perfectly soluble in water: it is not deliquescent, so that it may be given in the form of powder. It may be prescribed in doses of 15, 30, or 60 centigrammes (2½, 5, or 10 grains).

Syrup of Citrate of Iron and Magnesia is prepared by dissolving 8 grammes in 15 grammes of orange-flower water, with 180 grammes of simple syrup. This is one of the most agreeable preparations of Iron.

Saccharine Confection of Citrate of Iron and Magnesia.

Take of Citrate of Iron and Magnesia ... ... 1 drachm
Powdered Sugar ... ... 7½ "
Powder of Canella ... ... 1 "

Mix, and divide into powders, each containing twelve grains.

Lozenges of Citrate of Iron and Magnesia.

Take of Citrate of Iron and Magnesia ... ... ½ a drachm
Powdered Sugar ... ... 7½ drachms
Saccharine Confection of Vanilla ... ... ½ a drachm
Mucilage of Tragacanth, a sufficient quantity.

Mix, and divide into lozenges of twelve grains. [*Journal des Connaissances Médico-Chirurgicales*, 1st March 1850.]

ALKALI OBTAINED FROM THE KHAYA SENEGALENSIS (SWIETENIA SENEGALENSIS) A CHEAP SUBSTITUTE FOR QUININE.

M. Caventou has obtained an Alkali from the above-named tree, which he thus describes. It is non-crystalline, solid, opaque, of resinous aspect, yellow, very bitter, slightly aromatic, and easily soluble in water. If this salt possess the powerful anti-periodic properties of the bark from which it is derived, it must become a valuable article of the *materia medica*, as the price of Quinine (from the alleged scarcity of the cinchona bark) is becoming dearer every year. Acccording to M. Servant, the inhabitants of Senegal cure the worst cases of intermittent fever by a watery decoction of the bark of the Khaya. [*Journal de Pharmacie et de Chimie*, Nov. 1849.]

MISCELLANEOUS INTELLIGENCE.

Meeting of the Graduates of the University of London. A large and influential meeting of the Graduates of the University of London was held on Tuesday, 26th February, at the Freemasons' Tavern. The chair was occupied by Dr. Sibson, F.R.S., who, in his introductory remarks, forcibly alluded to the anomalous position in which the University at present stands; its degrees being of great intrinsic value, as obtained at the price of a large amount of knowledge and intellect, and yet being unappreciated by the world at large. The obscure situation of the University, which sometimes did not possess sufficient room for holding the examinations, and the non-participation by the graduates in its government, were alluded to as the great reasons for the indefinite position of the Institution. The admission to a share in the government was referred to by Dr Sibson, as being desired by the graduates, and as being an object worthy of attainment. Several resolutions were passed, but the following declaration, the adoption of which formed the second resolution, expresses the objects which the graduates have in view. "That one great principle recognized by the Government on the foundation of the University of London, was to accord to the new University 'an equality in all respects, with the ancient Universities, freed from exclusions and religious distinctions.' That, according to the present constitution of the University of London, the Senate forms the corporate body, and not only administers all

its affairs, but has practically a large power of altering its constitution by petitioning for and accepting such new charters as Her Majesty may be pleased to grant. That the members of the Senate not being connected with the University by education, have a less direct personal interest in its prosperity than those dependent on it for their academic rank. That the Graduates are the persons chiefly interested in the welfare and honourable reputation of the University, yet have no corporate existence, and are not admitted to any voice in University affairs. That while the undersigned acknowledge, with gratitude, the services rendered to the University by its founders and present authorities, and admit that some constitution like the present was necessary at its outset, they are convinced, that such a constitution was not intended to endure beyond the time, when the number of the Graduates would afford the materials for establishing the University upon a wider and more permanent basis. That the undersigned are of opinion that the lapse of further time will not tend to secure a more efficient assembly of Graduates, as every year is, in their present unorganised state, loosening the connexion between the holders of degrees, weakening their interest in the University, and lessening their knowledge of its affairs. That, as the number of the Graduates now amount to 546, and the number of the undergraduates to 802, including 112 who have passed the first examination for the degree of Bachelor of Medicine, the undersigned consider that the time has now come, when they may justly claim to be no longer excluded from the body corporate of the University. That the fact that the Graduates do not possess any power or collective voice in the University, tends to impair the value of their degrees, and to lower their social standing as compared with that of the Graduates of other English Universities; and that a change of constitution in this respect is likely to secure for their degrees a higher and more widely-spread reputation. That the simple admission to the present Senate, of individual Graduates, is not, in the opinion of the undersigned, calculated to secure all the advantages which would result in investing the Graduates with corporate powers."

The "Samuel Cooper" Testimonial. The commission for executing a marble bust of the late distinguished and highly respected surgeon, Mr. Samuel Cooper, has been entrusted to Mr. Butler, the eminent sculptor. The working-model, from which the bust is to be executed, is highly creditable to the artist, and forcibly brings to mind the great and good qualities for which Mr. Cooper was conspicuous. The place of deposit of the bust will not be decided on until it is completed; but we believe that its destination will be the Royal College of Surgeons. The committee intend (if the funds allow) to present a reduced copy of the bust, in Parian, to each subscriber of one guinea and upwards. The Honorary Treasurer (Mr. W. A. Hillman, 1, Argyll Street), and the Honorary Secretary (Dr. Wood, Bethlem Hospital), still continue to receive subscriptions from those who are desirous of expressing their respect for the memory of one of the brightest ornaments of British Surgery.

The "Liston" Testimonial. A meeting of the subscribers to the fund for erecting a memorial to the late Mr. Liston, was held on the 8th March, in Old Burlington-street. The Marquis of Anglesey presided. The Honorary Secretary, Mr. George, read the Report, from which it appeared that the sum subscribed towards the object in view, amounted to only 750*l.*, which sum was insufficient for the erection of a statue, as originally intended; that it was therefore proposed that four marble busts of Mr. Liston should be executed—one to be placed in the Royal College of Surgeons, another in University College, London, a third in the Royal Infirmary at Edinburgh, and a fourth to be presented to the family of the deceased; and that the residue of the money should go to pay for a gold medal, to be awarded annually by the Council of University College, London, to the best proficient in surgery. The

Report, and a resolution in accordance with it, were carried unanimously, and a committee to carry out the intention of the meeting, consisting of the Dukes of Beaufort and Buccleuch, the Marquis of Anglesey, Lord Kinnaird, and Count D'Orsay, formed; after which, thanks were voted to the Chairman, and the business terminated. [*Lancet*, March 9.]

New Hospital for Diseases of the Chest.—The Commissioners of Woods and Forests have granted a piece of ground near the Victoria Park for a new Hospital for Diseases of the Chest.

Legal Action for Defamation of Character brought by a Homœopathist.—An action was tried before the Bailiff and Jurats of the Royal Court of Guernsey, on the 9th March, in which John Ozanne, Esq., a gentleman practising homœopathy, was plaintiff, and De Beauvoir De Lisle, Esq., surgeon, defendant. The action set forth, that on the 24th of August, 1849, in the presence of a patient and other persons, Mr. De Lisle declared to Mr. Ozanne that he was "no professional man, an impostor, a quack, nothing but an impostor";—the whole being of a tendency to injure Mr. Ozanne in his profession as a medical practitioner, and being without any provocation on his part. The case was opened by the Queen's Comptroller, who presented an Act of the Court, dated March 1840, authorising Mr. Ozanne, who had obtained his diploma from the University of Paris, to practise medicine in that island. The authenticity of the Parisian diploma being disputed by the Queen's Procureur delegate, for the defence, the Court certified the validity of the objection. In the course of the trial, which occupied five hours, evidence was adduced to prove that Mr. Ozanne practised homœopathy; that Mr. De Lisle had refused to consult with him; and Drs. Magrath, Hoskins, Collenette, and other practitioners, severally denounced homœopathy as a system of quackery. The Queen's Procureur delegate, in the defence, cited numerous authorities, British and Foreign, who had expressed their strong disapprobation of the homœopathic system. The Bailiff, in summing up, said—"That by the Act of Court, Mr. Ozanne was authorised to practise his profession in the island. The words in the indictment imputed to Mr. De Lisle, had been proved by the evidence of witnesses; but it had not been proved that Mr. Ozanne was a quack. Many witnesses had been heard, and a heap of books had been produced which did not bear upon the case, although both were unanimous in sentiment that homœopathy is an imposture. But that was not the question for the Court to settle, inasmuch as that would be to decide without the required evidence. If Mr. De Lisle had satisfied himself with attacking homœopathy as a system of imposture, without descending to personalities, he could not have been cited before the Court; but when one individual told another who is practising that system, "you are an impostor", it was necessary that he should prove that he is such. But no such proof had been tendered. Looking at the position of the parties, it was necessary to inquire whether any provocation had been given? The words were uttered in answer to a question from Mr. Ozanne. He did not think there was provocation to justify the words used, inasmuch as they followed in the course of conversation. An opinion prevails among the faculty that homœopathy is a quackery, but when a person takes upon himself to prefer a charge against those who adopt that system, he takes upon himself the responsibility of proving his own words."—The Jurats were unanimous in declaring, that the Act of Court sufficiently established the quality of physician taken by Mr. Ozanne in his action. They also considered that Mr. De Lisle's words were not justified, but were used without premeditation; that Mr. Ozanne's conduct had been moderate and forbearing, and concluded by sentencing Mr. De Lisle to pay 5*l.* damages to the plaintiff, an *écu* (2*s.* 6*d.*) to the Queen, and costs. The method adopted by Mr. De Lisle for expressing his opinion of homœopathy was incautious. The course adopted by Dr. Williams, as described in the next paragraph, was milder, and at least equally efficacious.

CORRESPONDENCE BETWEEN DR. C. J. B. WILLIAMS AND A HOMŒOPATHIC PRACTITIONER. The *Lancet* of March 23rd, contains the following correspondence.

THE LETTER.

"—— Street, Friday, 22nd February, 1850.

"DEAR SIR,—I am very desirous of having your opinion in a case of suspected disease of the heart. The patient is the Hon. Mrs. ——, at present residing with Lady ——, —— Square. Will you have the goodness to inform me at what hour on Monday it would be convenient for you to see Mrs. ——?

"I think it right to state that Mrs. —— has been for many years a convert to homœopathy, and that I, as you possibly may have heard, practise that system of treatment. I mention this, because you may have some objection to meet a homœopathic physician in consultation, and I should much regret if I were the means of inducing you to do anything distasteful to you in ignorance of the above facts. I may, however, mention that it is as a matter of diagnosis rather than of treatment that your opinion is desired, and that my friends, Sir — —— and Dr. ——, have seen the case with me on former occasions. I remain, dear Sir, your very obedient servant,

"To Charles J. B. Williams, Esq. M.D. etc." "———."

THE REPLY.

"7, Holles Street, Cavendish Square, Feb 33, 1850.

"DEAR SIR,—I am obliged to you for your courtesy in wishing to have my opinion on the diagnosis of the case of the Hon. Mrs. ——, and for your candour in apprising me that she is under homœopathic treatment; but under these circumstances I must beg you to excuse my attendance.

"Believing, as I firmly do, that the so-called "homœopathic system" is an entire fallacy, and therefore calculated to do much injury to those on whom it is practised, I consider it *to be my duty to do nothing that can, directly or indirectly, countenance or aid it;* and it appears to me, that to meet a homœopathic physician in consultation, and to assist in the diagnosis of a case professedly under homœopathic treatment, would have such an effect.

"I need scarcely add, that I have no personal feelings in the matter. And hoping that you will soon return to the legitimate domain of rational medicine, "I remain, dear Sir, yours faithfully,

"To Dr. ——. "C. J. B WILLIAMS."

DR. WILLIAMS' conduct in this case is most honourable and worthy of imitation: but the adoption of any other course by a leading physician, would have been a heavy blow and a great discouragement to the practitioners of legitimate medicine. Minor men may (for their guinea bribes) be allowed to dally with "entire fallacies", but the consulting physician, who meets a homeopath, a hydropath, a chrons-thermalist, or any charlatan, must be carefully repudiated by the profession. We wish this hint to be acted upon: a laxity prevails.

FRAUD IN OBTAINING A DIPLOMA FROM THE COLLEGE OF SURGEONS OF EDINBURGH.—The following account of a trial, which took place at Edinburgh on the 9th March, before the High Court of Justiciary, we abridge from the *Caledonian Mercury*:—William Duncan, Amble, Northumberlandshire, and Alexander Cumming, surgeon and druggist, Broughton Street, Edinburgh, were then placed at the bar, charged with forgery; as also using and uttering as genuine a false and forged writing; as also falsehood, fraud, and wilful imposition; as also conspiracy to commit the said crimes; in so far as in October, November, or December 1844, they entered into a conspiracy to procure a diploma from the Royal College of Surgeons of Edinburgh to enable the aforesaid William Duncan to practise surgery and pharmacy without his actually appearing before the examinators appointed by the College to take the candidates for diplomas upon trial, by means of Cumming personating Duncan, and undergoing the necessary examination. In furtherance of this design, Cumming obtained from the Conservator of the

College a printed form of a schedule required to be filled up and properly attested by the candidate, exhibiting the full extent of his professional education, which he falsely and fraudulently filled up, and appended to it the signature of "William Duncan", and thereafter delivered it to the President of the College, pretending that he was the person whose signature was attached to the document. Cumming afterwards attended and passed the usual examination appointed by the College, on the 4th December 1844, and by representing that he was the William Duncan represented in the certificate, he obtained a diploma in Duncan's name, qualifying him to practise surgery and pharmacy, which he immediately delivered to Duncan, to be used by him as a diploma in his favour, and which was accepted by Duncan for this purpose. The parties were apprehended about the beginning of January last. Both prisoners pleaded not guilty.

The Lord Justice Clerk, after hearing an argument by Counsel, stated that from the manner in which the charge was stated in the indictment, the Court were under the necessity of directing the acquittal of Duncan. The indictment set forth that Duncan and Cumming, in carrying out their conspiracy, were both in Edinburgh, but no evidence had been adduced to show that this had been the case in regard to Duncan. The Solicitor-General then addressed the Jury for the prosecution, and was followed by Mr. Logan for the prisoner Cumming; after which the Lord Justice Clerk summed up. The Jury, without retiring, delivered a verdict finding Duncan not guilty, in respect that the Court had directed that the facts proved did not support the charges set forth in the indictment, and finding Cumming guilty of all the charges as libelled. Cumming was then sentenced to one year's imprisonment. Duncan was dismissed from the bar.

Quack Pill-makers seem to be as little Protected by Law as regular Physicians and Surgeons! Such an announcement may surprise our readers: but it seems to be true. In an action lately tried at the Northern Circuit, before Mr. Baron Alderson, in which a druggist named Kirkus was plaintiff, and another named Atkinson was defendant, the action was to recover damages for manufacturing and selling pills called "Torr's Family Pills". The plaintiff married the daughter of Torr, and thus came into possession of the recipe. He sold the pills under the title of Torr's Family Pills, manufactured by Kirkus. The defendant succeeded to Torr's business, and he sold the pills also, but as Torr's Family Pills, manufactured by Atkinson. The labels were the same in both instances. The counsel for the defence contended that, so long as the defendant did not profess to sell Torr's Pills, as manufactured by Kirkus, he had a right to manufacture and sell Torr's Pills, as manufactured for himself. The judge charged for the defendant, who obtained the verdict. Thus, then, the right to a patent or quack medicine may be defeated by the person making it merely adding to the label, "as manufactured by ——!"

Remuneration of Medical Men when Summoned to give Evidence at Quarter Sessions. In a case of action for assault (Dillon *v.* Reedy), tried before the Assistant-Barrister, W. E. Major, Esq., at the Kilrush Quarter Session for January, Dr. Foley of Kilrush was summoned by the plaintiff, to testify to injury received. On being called upon to be sworn, he applied to the barrister for an order for remuneration for loss of time, and stated that he had been frequently examined in the Superior Courts, as well civil as criminal; that in every instance the Judges awarded compensation for loss of time, and hoped his worship would extend the same protection to him. The barrister replied, that the claim was a fair one; that his time was as much lost to him there as at the assize or at any other court, and he would award to him the same remuneration as the Judges were in the habit of doing. He called on the plaintiff's attorney, Mr. Mat. Kenny, to pay the witness. Mr. Kenny asked the witness, what payment he required? The reply was, "At

least a guinea." The fee was refused. Dr. Foley told the Court, that his object was to assert a principle. It was now established; thanks to his worship for the willingness and readiness he evinced to protect professional rights, and left the Court without being sworn.

TESTIMONIAL TO WILLIAM BUSH, ESQ. A very handsome silver library inkstand has been presented to the above gentleman, bearing the following inscription:—"Presented to William Bush, Esq., one of the medical officers of the Bath Union, by 456 contributors, consisting chiefly of the poor of Weston, with whom the subscription originated, in grateful testimony of the kindness, skill, and unwearied attention, with which he devoted himself to the service of the sick in that parish, during the prevalence of cholera in the year 1849". The idea of presenting a testimonial to Mr. Bush, emanated, in this instance, from the poor, many of whom experienced his valuable and zealous attention during the time of the late epidemic; but the subscription was by no means confined to this class.

HOSPITAL FOR SICK CHILDREN.—Dr. West, Dr. G. Burrows, Dr. Robert Ferguson, Dr. Bence Jones, and Dr. Latham, with the assistance of others, are zealously endeavouring to accomplish the establishment of a Hospital to contain 100 beds for sick children, between the ages of two and twelve. Such an institution is much wanted as a Clinical School, though but little comparatively can be learnt of many of the diseases of very young children in an hospital. Calm observation of large numbers of children in their homes, during health and in disease, and among the rich as well as the poor, is indispensably necessary to one who aspires to treat successfully this most numerous and most interesting class of cases upon whom the family physician is called to attend.

FOREIGN PLAGIARISMS.

The *Gazette Médicale* for March 23, in the report of the Academy of Sciences of Paris, states that M. SEDILLOT, of Strasbourg, has communicated a *new method* of operating in Staphyloraphy, with the account of a successful case. This "new operation" is nothing more nor less than the division of the abductor muscles of the palate,—an operation proposed and described by Mr. FERGUSSON, in the *Medico-Chirurgical Transactions* for 1845, further noticed in the second edition of his work on *Practical Surgery*, also in the *Medical Times* for 6th and 13th March, 1847; and lastly, forming the subject of two papers in the LONDON JOURNAL OF MEDICINE for January and February 1849. Our French *confrères* have either an astonishing amount of self-complacency, or are in a lamentable state of ignorance of the labours of Englishmen in the medical sciences. M. Sédillot is pre-eminently in this condition; and we can only say of his conduct, that, if acquainted—and we can scarcely believe him to be otherwise—with Mr. Fergusson's publications, he has acted in a manner far from honest; if he has not, we know not what excuse to imagine for such deplorable—we may say disgraceful—ignorance.

In DR. OPPENHEIM'S *Zeitschrift* for November 1849, we have met with "Contributions to the Pathology and Treatment of Tropical Fevers, elaborated *(bearbeitet)* from the newest sources, by DR. HELFFT." At the *third* page there is a reference, in a foot note, to "James Bird, Report of the European General Hospital at Bombay." The first few sentences of the article struck us as being very similar to something which we had read before; and on referring to DR. JAMES BIRD'S papers on Tropical Fevers, published in this JOURNAL in January and February 1849, we found that, with the exception of a few omissions, principally of the pathological views of the English author, the whole of Dr. Helfft's *elaborate* undertaking is a nearly literal translation of Dr. Bird's papers, commencing at the second page, with the observations on "Tropical Fever in General." Wherever Dr. Bird's name is introduced, it is only as an *occasional contributor*, in common with Mr. Gray, Dr. Mardon, and the other authorities cited by Dr. B. himself. The resemblance is so exact, that Dr. Bird's papers would almost, if not entirely, supersede the use of a dictionary for the translation of Dr. Helfft's article.

This appears to us one of the most barefaced instances of plagiarism with which we have ever met. We have not made this statement, without duly examining and

comparing the two articles; but the German production affords such incontestable internal proof of having been directly derived from the source to which we have referred it, that we cannot restrain our expressions of disapprobation at such a flagrant breach of all the rules of literary honesty. Such conduct can never conduce to the reputation of any one who commits it.

We call the attention of the Editors of Foreign Journals to the thefts, which are constantly being made by their contributors from the pages of British Medical Periodicals, in the hope that they will assist us in holding up such conduct to the scorn and contempt of the profession in all nations. For our own part, we must protect our countrymen; and insist on having their names mentioned when their works are appropriated, or their discoveries adopted.

APPOINTMENTS.

Budd, Dr. S., elected Physician to the Exeter Dispensary, in the room of Dr. Barham, resigned.

Hare, C. J., M.D., Senior Physician to the St. Marylebone Infirmary, appointed Assistant-Physician to University College Hospital.

Jemmett, Dr. Benjamin, elected Physician to the Westminster General Dispensary, in the room of Dr. Wegg, resigned.

Malgaigne, M., elected, after a severe *concours*, Professor of *Médecine Opératoire* in Paris, in the room of the late M. Blandin. The numbers at the final scrutiny were—for M. Malgaigne, 8; for M. Nélaton, 4; for M. Robert, 3.

Taylor, Dr. R., elected Physician to the St. Pancras Royal General Dispensary, and to the Central London Ophthalmic Hospital, Gray's Inn Road.

OBITUARY.

Allen, John, Esq., Surgeon, aged 60, at Epsom, on 6th March.

Boley, R., Esq., of Ashley Hill, Bristol, suddenly, while attending a patient, on 11th March.

Boyrenson, T., M.D., at Kaira, Bombay, of jungle fever, on 6th February.

Carver, Walter, Esq., Half-pay Surgeon to the 4th Veteran Battalion, aged 74, on 27th February.

Dix, Robert, Esq., Surgeon, at Brighton, aged 76, on 20th February.

Gray, John, Esq., Sherborne, Dorset, on 24th February.

Hutchinson, William, M.D., at Isleworth, aged 57, on 18th March.

Malyn, John, Esq., F.R.C.S., many years Surgeon to the Western Dispensary, and Lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine, aged 48, at Kentish Town, on 9th March.

M'Leod, Charles, Esq., Surgeon H.E.I.C.S., at the Free Church Manse, Snizot, N.B., on 4th March.

Marjolin, M., Professor of Surgery in the Ecole de Médecine at Paris, aged 70, on the 4th March.

Pardoe, Geo., M.D., at Little Holland House, Kensington, aged 40, on 9th March.

Prevost, M., at Geneva, lately. He was distinguished for his valuable contributions to physiology and medicine.

Stokes, J. J. Esq., Acting Superintending Surgeon, of the Nizam's army, at Elichpoor, on 30th December, 1849.

Stuart-Cooper, Dr., formerly *chef-de-clinique* of the Faculty of Medicine in Paris, of diabetes mellitus, lately.

Taylor, Thomas, Esq., Surgeon, at his residence, Bethnal Green Road, aged 39, on 7th March.

Young, Edward, Esq., Surgeon, wrecked in his passage from Wellington, New Zealand, to Port Victoria, Akaroa, in August last.

BOOKS RECEIVED.

Appeal to the Public in behalf of a Hospital for Sick Children. By a Provisional Committee. London: 1850. Appeal to the Medical Profession in behalf of a Hospital for Sick Children. By P. M. Latham, M.D., G. Burrows, M.D., R. Ferguson, M.D., H. Bence Jones, C. West, M.D. Blair on Yellow Fever. London: 1850. Hunt on Diseases of the Skin. London: 1850. Parker on the Treatment of Secondary Syphilis. London: 1850. Regulations of the Society of Apothecaries. London: 1850. Wilson on Diseases of the Skin. London: 1850.